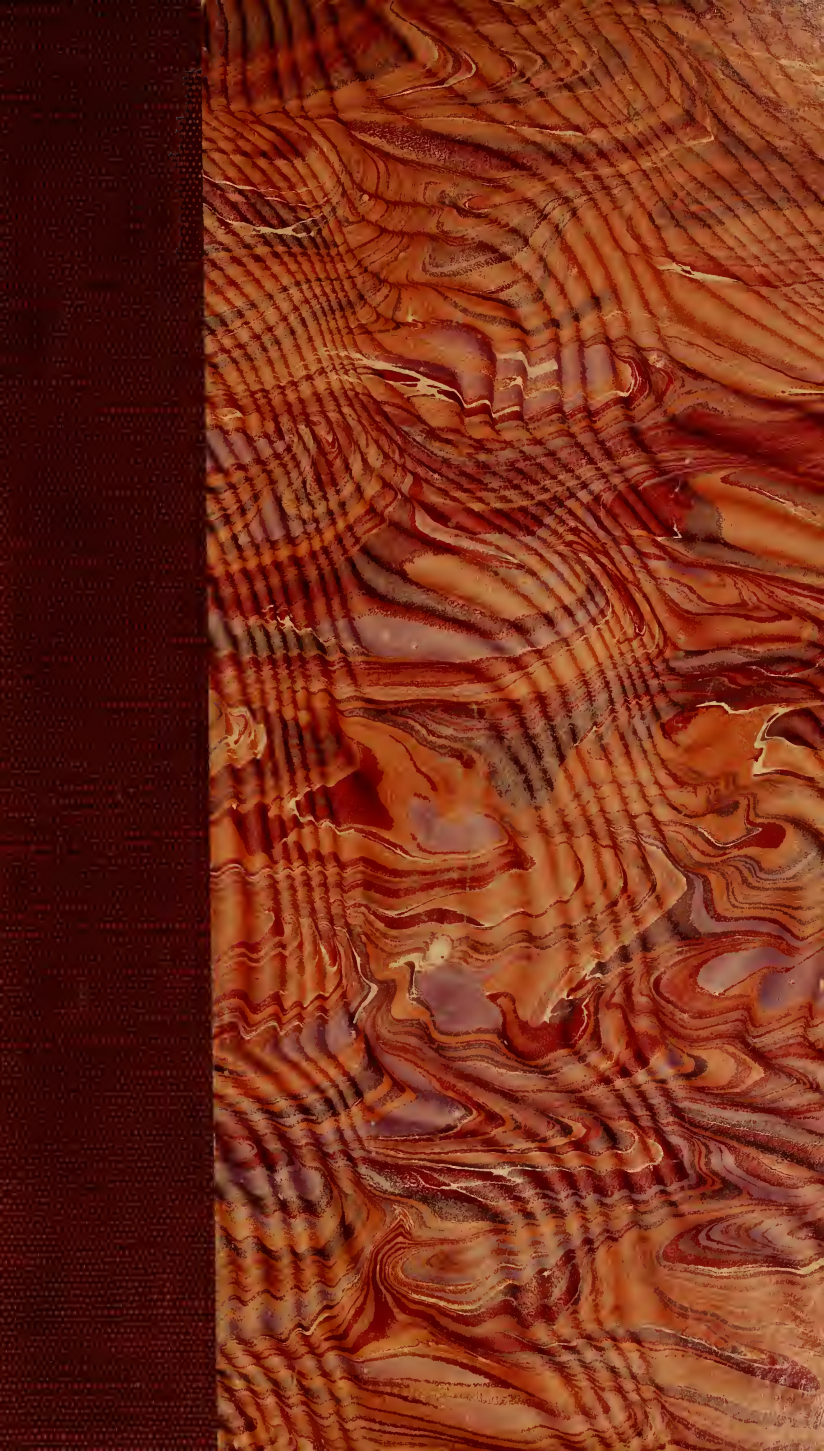




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ARMOUR AND COMPANY CHICAGO

To Doctors and Druggists:

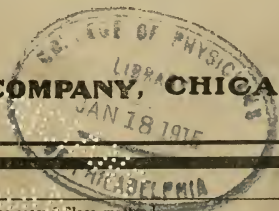
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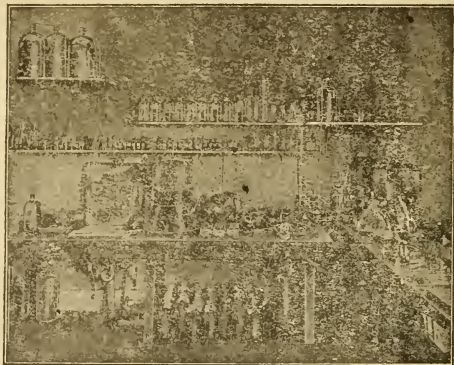
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Prevention and Treatment of Colds

Colds are generally caused by attacks of bacteria upon the mucous membranes of the respiratory passages, due to lowered resistance or to special virulency upon the part of the attacking bacteria.

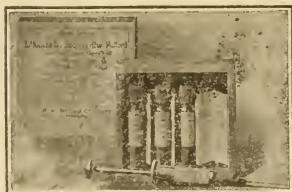
Infection is overcome by the production of antibacterial substances (antibodies). When the affected tissues are unable to produce antibodies sufficient to repel invasion, other parts of the body may be stimulated to produce the necessary antibodies by injecting killed bacteria corresponding to those causing the cold. Dr. R. W. Allen, one of the leading British authorities on vaccine therapy, says:

"As the specific treatment of catarrh, both acute and chronic, has been amply demonstrated to be attended with almost universal and complete success, the question at once arises whether nothing can be done along similar lines to secure immunity against future attacks. The success which is now well recognized to attend such efforts is sufficient answer. . . . I have had a fair number of cases in which complete immunity has persisted for several years and, so far as I can estimate full immunization appears to have been maintained in the great majority of cases for a period of about six months."-- *Vaccine Therapy: Its Theory and Practice.*



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H. B. WEAVER, M. D., ASHEVILLE, N. C.

The Charlotte Medical Journal

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No. 1

Dr. Henry Bascom Weaver.

Edited by Drs. D. W. and Ernest S. Bulluck,
Wilmington, N. C.

Dr. Henry Bascom Weaver was born on a farm near Weaverville, N. C., on August 2, 1851.

He attended the schools in his neighborhood until 1868, when he was sent from home to a distant high school. In these schools he received all the literary training that was possible in those days—a period soon after the Civil War, when there were no colleges in the South. His father not being able to send him North, he had to content himself with this education.

In 1869 he began the study of medicine under Dr. J. A. Reagan, reciting daily as at school his lessons in anatomy, physiology, chemistry and materia medica. He entered the Medical Department of Washington University at Baltimore in 1870. He graduated in 1872 with the highest honors in a class of sixty-seven, being the youngest in his class—in his twenty-first year.

Immediately upon his graduation, Dr. Weaver located in Bakersville, a mining town, Mitchell County, N. C., where he entered the general practice of medicine and surgery. He had much practice in surgery, obstetrics and gynecology, and here he learned the great lesson of self-reliance. He early practiced surgery with the then new carbolic acid antiseptics on many cases of severe burns and contusions which occurred among the miners.

Upon his marriage in 1872 to Miss Hattie M. Penland, he removed to Weaverville, his old home, where he continued the practice of medicine.

When the Medical Society of the State of North Carolina met for the first time at Asheville in 1881, he went before the Medical Examining Board, which he passed, and obtained license to practice in North Carolina. At that meeting he joined the Society and from that time for thirty-six years he has been an ardent and enthusiastic member, serving in the State Medical Society in many very important offices during this time. In 1911 he was made an Honorary Fellow of the Society.

Dr. Weaver has the honor and distinction of being the original advocate

and champion of the "Misdemeanor Clause" in our medical laws regulating the practice of medicine in North Carolina. In 1884 at the Raleigh meeting introduced the first original resolution in the Society, asking the legislature to enact a law making it a misdemeanor to practice medicine or surgery or any of the branches thereof without first obtaining a license to do so from the State Board of Medical Examiners. After a long and spirited debate, this clause was approved by the State Medical Society, and the following winter enacted in to the statutes and is now one of the most important medical laws of the State of North Carolina. At the Wilmington meeting in 1892, Dr. Weaver was elected a member of the Board of Medical Examiners. This position he filled with credit and examined over six hundred applicants for license during his term. In 1903 he was elected president of the Society. He chose as his annual address the subject of Tuberculosis. His brilliant discourse heralded the birth of the present great campaign of education against the great white plague.

During the past quarter of a century Dr. Weaver has read many papers on various subjects before the Society, especially on the different complex phases of the tuberculosis; also on the functions of the internal secretions which are now agitating the medical profession to such a degree.

While passing only as a general practitioner, Dr. Weaver has made diseases of the heart, lungs and gynecology a specialty.

Dr. Weaver takes great interest in the sociological problems of the day; and is said to be a pioneer member of the Y. M. C. A., having become a member in 1872. He has always been a staunch and uncompromising advocate of temperance, having joined that cause in his youth. He is a member of the Methodist Episcopal Church (South.)

In 1887 he settled in Asheville, N. C., which was then but a small town. He is vigorous and alert in the practice of general medicine, having a large clientele in consultation in several counties of Western North Carolina.

Etiology and Treatment of Pellagra.

By B. W. Page, M. D., Lumberton, N. C.

For two and a half years I have made a careful study of intestinal bacteria associated with pellagra but the intestinal flora and fauna include so many species I have looked with doubt on the pathogenicity of any of them until it is definitely proven. In addition to the colon group of bacteria which are found in feces of pellagrins, I have observed with much interest a bacillus which must be the cause of the disease.

This bacillus is from four to ten microns in length and is more sharpened at the ends than others of the colon group. It develops by spore formation and presents itself in many forms. When spore formation is about to occur a point of cloudiness or an area of bright refraction appears in the protoplasm and the cell generally elongates. The spore enlarges, the cell membrane bursts and the young bacillus emerges through the opening. On first appearance the young bacillus is very active and for a few seconds it is spiral or corkscrew shaped. It gradually elongates and becomes less and less motile. Later it may appear rod-shaped, slightly curved or as a long undulating thread, often suggesting the appearance of a streptococcus before sporulation occurs.

In all its forms the bacillus is motile. The different sized cells as well as the bacillus itself have the power of independent motion, and so varied is the appearance of the organism, the microscopist often believes he is dealing with many varieties. It is best studied in a fresh stool, in a warm room, but it is motile in a specimen two weeks old or as long as there is moisture. Morphologic changes, however, are seldom observed except in fresh specimens. The bacillus is aerobic; anaerobic, and is discolored by Gram's and Gabbet's methods of staining. The spores are little affected by these stains.

Daily specimens from a single case of pellagra vary much in appearance. One specimen may show an abundance of spores and very few if any bacilli, while another specimen may reveal a dozen or more bacilli in one field with very few cells. A thin stool placed in an incubator often changes its appearance in forty-eight hours. So numerous are these bacteria in many specimens, they compose five per cent. of the solid portion of the excrement and more than seventy-five per cent. of all the motile organisms present. Sterile feces afford the best culture medium. They grow well in this medium

at a temperature of eighty (80) to ninety (90) degrees.

Animal inoculation experiments have not been very successful. A mild diarrhoea and nervousness was produced by feeding a cat on food contaminated with pure cultures and the bacilli were again observed on microscopic examination. In a man pellagra has been induced by accidental transference of cultures of the bacilli. Pharyngitis and bronchitis developed within three days and was soon followed by definite intestinal and nervous symptoms of pellagra. The pharyngitis and bronchitis subsided in about ten days but the other symptoms remained until successful treatment was administered. The microscope revealed the organism in its many forms for four weeks.

Of the sixty-four cases of pellagra examined, the bacilli were seen in great numbers. Twenty-one of these have been examined many times and the organism was present in every instance for many months. The organism has not been seen on examination of healthy individuals and those suffering from other diseases.

The bacillus in culture has been tested by many drugs. A one per cent. solution of ichthylol seemed to have a most decided effect. I have partially tested this drug on twenty-two cases of pellagra within the last ten weeks. One or two five grain enteric coated pills three or four times a day for three weeks seems to cure the average case. Nearly all uncomplicated cases consider themselves cured by the tenth day and the bacilli as a rule, disappear by this time but by stopping the drug this early the bacilli and symptoms return in one-fourth the cases three or four weeks later. From the short experience I have had with the drug I readily conclude, however, that an eight day treatment is of far greater value than a four months' treatment with the arsenic preparations. I have never found a case entirely free of the bacilli after treatment with the latter drug. In the very severe cases suppositories or colonic irrigations are of great value. In so short a time it is impossible to have tested the drug thoroughly but I regard it as a specific. Just how long the spores will lie dormant in the intestine, time only will prove.

The bacilli in all stages of the disease are present in enormous numbers in the contents of the large intestine. I believe they are usually confined to this situation. Their deleterious effects upon the body appear to be largely due to the production of toxic substances which in addition to serious intestinal irritation or le-

sion may on absorption incite those systemic disturbances which characterize the toxæmia. The disease must be spread by direct contact with the excrement of those afflicted with the malady or by flies conveying the parasite to articles of food.

Scleral Trephining Glaucoma and Results.*

By J. G. Johnston, M. D., Chester, S. C.

In view of the fact that the work of Col. R. H. Elliott on the subject of Glaucoma is attracting the attention of medical men everywhere and in view, also, of the fact that Glaucoma is with us constantly and do what we will, there seems always some regret that we did not do something else, or do the same thing in a different way, it seems that a few minutes of our time could not be better employed than by a report of a few cases treated according to this plan, and some discussion concerning them. I shall therefore call your attention, very briefly, to a few cases as I have taken them from my records and the results as I have been able to follow them up.

Case No. 1. Mrs. C., age 56. Came to the office November 5th, 1913, with the following history:—When 25 years old had a severe attack of sore eyes, since then has had occasional attacks. One week before coming had severe pain in the left eye and which had continued ever since. I found the left eye red, pupil dilated and slightly irregular. Tension up and anterior shallow. Complaints of rings around light and blindness on nasal side. Right eye tension normal and anterior chamber shallow. She was put on Eserine for a few days until the inflammatory symptoms subsided when a scleral trephining was done and a small section of iris was removed. She suffered considerable pain during the operation and developed the most distressing attack of shortness of breath I have ever seen. This was soon allayed by a hypo of Codeine and she had an uneventful recovery. Went home in one week and a few days after was feeling so well she went out, picked up some stovewood and had a sharp attack of pain. This soon subsided and she has had no pain since that time so far as I can discover.

Case No. 2. J. K., Col., age 63. Came on December 1st, 1913, saying:—8 years ago his right eye began to fail and kept on until sight was lost. Left eye began

to get bad 3 years ago. Sharp pain in each eye before sight failed. Complaints of everything looking smoky. I found only light perception in right eye. Vision in left eye 20-120 and no nasal field. Anterior chamber shallow in each eye. Pupils dilated but react to light. Cupping of disk marked in each eye but worse in right. Tension in each eye slightly up. Nerve head white in each eye but more marked in right. December 4th, made double trephine operation in usual manner. No pain during operation or afterwards. Got good filtering cicatrix in each eye and while he had no nasal field in left eye at time of operation, six weeks later his visual field extended 30 degrees on the nasal side and his vision was 20-60 plus 3. Have heard nothing from him since that time.

Case No. 3. L. P., Col., age 63. Two or three months before I saw her she began having pain in her right eye, vision failed and kept getting worse until she lost the sight of it entirely. Left eye began to pain a short time after wards and vision failed until she could only count fingers at six inches. I found the right eye stony hard-pupil dilated with green reflex. Cornea anesthesia and a small opaque spot in the centre of the lens. Tension in left eye plus 1, pupil slightly dilated, cornea anesthetic conjunctive red, green reflex and lens nucleus opaque. Two days later I did a double trephine operation, resulting in relief from pain, but no improvement in vision until she returned to her home. She was extremely nervous and not being able to keep her eye still, I buttonholed the conjunctive in the left eye but noticed no bad effects from it. Heard from her the other day—She was able to travel around but my informant was unable to tell me whether her vision had improved any or not.

Case No. 4. Mrs. V., age 57. Gave history of Neuralgia with pain in eyes for 5 or 6 years. Pain worse in right eye and she lost sight in it about two years ago. I found pupil of right eye dilated, cornea anesthetic, anterior chamber shallow, disk markedly cupped, about 3 D. media clear. Left eye—Pupil dilated but not so large as right, cornea slightly anesthetic, some cupping of disk. Field of vision narrowed, but contrary to usual finding the retraction was above and below. Patient was extremely nervous—so much so—that we had to give her ether in order to operate. The operation was performed in the usual way except that the conjunctival incision was sewed and sutures allowed to stay in for three days. Re-

*Read at meeting of Fifth District Medical Association, Rock Hill, S. C., November 18.

covery uneventful. No pain or neuralgia since the operation and vision, with correcting glass, in left eye is normal. In addition her nervousness is almost entirely gone.

Case No. 5. J. W. V., white, male, age 40. For several years has been having occasional attacks of pain in right eye. Left eye was removed several years ago as result of an injury. I found tension plus 1, pupil dilated cornea steamy and anesthetic, veins of sclera dilated, eye red, typical appearance of Glaucoma. Vision reduced to 20-200. The fact that he had only one eye made me extremely anxious concerning him and I strongly urged immediate operation. This advice was followed and the operation performed in the usual way. His pain passed away and the next day his eye was looking much better. I left for New York that evening and gave him a weak solution of Atropine to use in his eye until all inflammation subsided. Have not seen him since but his mother tells me that his eye got alright, his vision improved and that he had gone back to work.

Case No. 6. Mrs. J. W. B., age 51. Has had continual pain in head for past year. Says that three weeks before I saw her she had a cutting sensation in her eyes followed by dimness of vision. Complains of rings around the light. I found pupils unequal—left larger. Slight cupping of disk and anesthesia of cornea in each eye. Retinal veins dilated and arteries slightly contracted. Scleral veins dilated in right eye, left normal. Vision in right eye 20-30, left 20-40. She was put on Eserine for a few days, but the improvement in her eyes was very slight and the pain continued in her head. She was then operated on—a scleral trephining being done in each eye. This was done under Cocaine and in the usual way. She had no pain in her eyes, but occasionally had pain in her head for several days afterward. This gradually passed away until now she is free from pain. Only once since the operation has she had much pain and that followed an exceptionally good day when she went into the kitchen and picked up a heavy churn of buttermilk. She has since been more careful and has had no more pain.

Two other cases should have been on this list. One refused operation was put on Eserine and is now, we hope, pursuing the even tenor of her way. The other is being treated through an attack, has about recovered and will be operated on in a few days.

Just a word now in regard to the operation of Scleral Trephining. The eye is cocaineized thoroughly and after the speculum has been inserted an incision about 5 mm from the cornea and roughly parallel to the cornea scleral margin is made and the conjunctive dissected up and turned down over the cornea. This dissection is carried down into the cornea and in fact the cornea should be split for about 1 mm. The trephine is now placed as far forward as possible, without injury to the conjunctival flap, and a button of sclera and cornea removed. It is very important to carry this dissection far enough as otherwise you are liable to injure the ciliary body and eventually lose the eye.

Chester, S. C.

Report of Four Cases of Perforation of Stomach from Peptic Ulcer.*

By Robert L. Gibbon, M. D., F. A. C. S., Charlotte, N. C.

In order not unduly to prolong this report, I shall limit myself to a discussion of only a few of the many interesting questions that naturally arise in connection with the subject of gastric or duodenal ulcer. Chief among those is the important one of diagnosis, which however, I will not take up here, farther than to say that the modern view of gastric diseases of digestion places a not inconsiderable number of them in the surgical class.

This view follows quite naturally upon our present day knowledge, that a great percentage of chronic types of so-called dyspepsia are dependent for their persistence upon certain well defined anatomic changes, either in the stomach itself, (as in hourglass stomach, obstruction of the pylorus with dilatation as a sequence, or peptic ulcer); or certain associated diseases more or less remote from the stomach, but which an account of the nerve supply, make themselves known largely by symptoms of digestive disturbance. In this class we readily call to mind such diseases as gallstones, cholangitis, appendicitis, pancreatitis, perigastric adhesions, etc. Since therefore mechanical causes account for so large a proportion of long continued, and intractable cases of dyspepsia, so-called, it is clearly apparent that we must look to mechanical means if we hope to give satisfactory relief in the great majority of this type.

*Read before the York County, S. C., Medical Society.

Modern gastric surgery is only about 30 years old. In 1881 Mikulicz sutured a gastric perforation from an ulcer, the patient dying. In 1881 Bilroth saved his first patient with a similar trouble, and in the same year Wolfer performed the first gastroenterostomy. This operation has now become standardized, largely through the successful efforts of American surgeons.

Peptic ulcer is a fairly common disease, and it has been estimated that from first to last 5 per cent. of the human race suffer from it. I am not prepared to say whether it is more frequent in some localities than in others, but it is evident that the surgeons of certain localities, possibly due to peculiar ability and reputation along this line, seem to do a great deal more of this kind of work than do other.

Some American doctor asked the great English surgeon, Moynihan, after seeing so many of these cases in his clinic, if gastric ulcer was not much more common in England than in America, and the reply was to the effect that it was largely a matter of diagnosis.

The cases of gastric diseases coming under the surgeons care may be largely grouped under the head of cancer, and peptic ulcers, together with the complications and sequella of ulcer, for although an ulcer may entirely heal, it sometimes leads to such cicatricial contractions as to obstruct the pylorus, cause an hour-glass stomach, or adhesions to neighboring parts, so as to permanently cripple the organ.

Chronic Peptic ulcer, which is the type most frequently requiring surgical interference, appears usually after 35 years of age, is essentially a chronic process, often lasting for years, and where the muscular coat is involved may never heal. It produces pain, as a symptom, in 95 per cent. of cases, bloody vomiting at one time or another in 80 per cent. of cases. It is usually single, but two or more ulcers are found in 19 per cent. of the cases. In its course over years it may produce a fatal hemorrhage, perforative may occur, or if by good fortune it should heal destructive adhesions and contractions may take place. Finally it may become the seat of gastric cancer. In only 50 per cent. of cases is it curable by medical means, according to statistics of the Mass. Gen'l Hosp., although such treatment is always advisable before a resort to the surgical.

In duodenal ulcer the blood shows in the stool, and is rarely vomited, but per-

foration is more common, because of the relatively thin walls. Such, in brief, is the clinical history of chronic gastric and duodenal ulcer. Of the four cases of perforation of the stomach and duodenum here reported, all have come under my observation in the past five years.

Case No. 1—occurred 1909 in a middle aged man, who was taken suddenly sick on his farm, some 12 miles from Charlotte, and whom I saw about 24 hours later. The abdomen was at that time greatly distended and rigidity was general; there was retention of urine, a moderate rise of temperature, vomiting and a rapid pulse. The facial expression was bad. The history obtainable at the time was decidedly indefinite, except as to chronic indigestion and it was impossible to arrive at the original cause of the attack in the condition of advanced general peritonitis then present. The patient was brought to the Presbyterian hospital arriving in an exhausted condition. With but scant hope of accomplishing any good, the abdomen was opened through the right rectus disclosing the presence of a quantity of free fluid, wide spread peritonitis, together with a very much inflamed appendix, which however, on careful examination was evidently entirely secondary, and in no way responsible for the condition. An extension of the incision brought into view a perforated ulcer of the duodenum, as the all sufficient cause of the trouble. This was closed and free drainage employed, but the patient died a few hours later.

Case No. 2—Was a man 57 years of age who entered the hospital, March 1911, under the care of another physician, to be treated for "stomach trouble," which he said had existed for 15 years, but had been worse for past few months. Perforation occurred on his first night in the hospital, and I saw him some 8 or 10 hours later. This patient was an entire stranger, from a distant town, and some time was lost in getting into communication with his family, so that it was 17 hours after perforation before he received surgical attention. In the meantime he presented the usual symptoms of a very grave, acute abdominal condition. The abdomen was distended and rigid, pulse rapid and weak, skin covered with a clammy sweat.

Operation showed a clean cut perforation of the stomach near the pylorus. The opening was closed, a piece of omentum stitched over it as an additional safeguard against leakage. Drainage was

made through the incision, and also through a suprapubic stab. After a stormy convalesce the patient made a good recovery. Strange to say, when seen some 3 months later he reported that his stomach symptoms had entirely disappeared, the ulcer having apparently healed over.

Case No. 3—Presents a history very similar to No. 2. A man, 48 years of age, with a vague history of dyspepsia, heart burn, gas, inability to eat greasy food, etc, was suddenly taken violently ill while picking cotton on his farm. His physician quickly realizing the serious nature of the attack, placed him in an automobile and hurried him to Charlotte, a distance of 22 miles, where he was operated upon at 2 o'clock in the morning, soon after arrival, or 10 hours after the beginning of his attack. He was clammy, almost pulseless, with an anxious countenance, but the abdomen was not, as yet, much distended.

At operation a perforation of the pyloric portion of the stomach was found, surrounded by such a mass of indurated diseased tissue that the stitches tore out almost as fast as they were placed, and it was necessary to supplement the closure with an omental graft. A posterior Gastroenterostomy was then done, and the usual drains placed. For 24 hours after the operation the patient was almost pulseless, but finally rallied, vomiting ceased, bowels moved and strong expectations of his recovery was entertained, but an ominous change in his condition appeared on the afternoon of the third day, and he died four days after his operation. An autopsy was not held, and I am unable to say whether death was the result of his original peritonitis, or whether the gastro-enterostomy became leaky and added another complication to his already exhausted system. While it is always a temptation in these cases to do a gastrostomy in the hopes of making a complete cure of the ulcer, the additional time consumed often makes it a questionable procedure.

Case No. 4—Was a man 40 years of age, and gave the usual history of gastric derangement over a long period. He was taken rather violently sick with abdominal pain and vomiting on Wednesday, and I saw him first on Friday. At that time his temperature ranged from 100 to 101 Far., white blood count was 12000, abdomen was rigid and tender only on the right side, and the general appearance of the case suggested an appendix.

On Saturday morning a rectus incis-

sion showed a free pus—like fluid in the cavity, marked signs of peritonitis, and a red highly inflamed looking appendix. But here again it was evident that the grave symptoms present could not be accounted for by an appendage in the first stages of inflammation. The incision was extended upwards and investigation revealed a perforation of a duodenal ulcer, high up under the liver. The opening was imperfectly plugged by adhesion to the great omentum, which permitted only a comparatively slow leakage, a condition to which, no doubt, this patient owed his life.

The opening was closed with considerable difficulty because of the induration, and the same use was made of an omental graft, as in the preceding case. He made a fairly prompt recovery and left the hospital in about three weeks. The operation was done in April 1914, and the man tells me that his digestion is better than before his sickness, although he has to exercise a certain moderation in eating. I have suggested to him the wisdom of having a gastroenterostomy for the cure of his ulcer, in case the symptoms should warrant it, but for the present he seems very well satisfied.

In reporting these four cases of perforation of the stomach and duodenum from ulcer, I have purposely omitted much of the purely surgical minutiae, technical points of great interest to the surgeon but of no special value to the general practitioner, or the internist. In order not to transgress too far upon your patience I have also barely mentioned in outline a few of the more important facts in the clinical history of peptic ulcer. It will be noted, however, that even in this small series of cases there is a close correspondence to the generally accepted views regarding peptic ulcer of a chronic type. All the patients were males, all had reached mature age, all had a history of prolonged gastric symptoms, and the point of perforation was in each instance either the pyloric portion of the stomach, or the duodenum.

The two special points I desire to emphasize are, first, that cases with long continued digestive disturbances, resistant to intelligent medical treatment, and but temporarily influenced by diet, etc., are usually dependent upon some definite anatomic lesion, which in quite a large percentage of instances, can only be satisfactorily handled by surgical means.

Secondly, in the presence of perforation, the success of operative means is in almost direct proportion to the prompt-

ness with which the serious nature of the trouble is recognized, and a resort to surgical measures instituted. A sudden and violent abdominal attack, occurring in an individual giving a more or less characteristic history, should at least suggest to our minds the possibility of a perforation.

Psycho-Neuroses in their Relation to Chronic Infections.*

By J. Allison Hodges, M. D., Professor Clinical Neurology and Psychiatry, Medical College of Virginia, and Physician-in-Charge Hygeia Hospital, Richmond, Va.

Psycho-Neuroses, or so-called functional diseases, may arise independently, or may coexist with gross organic disease. While the boundary line between organic and functional diseases is difficult to define, yet convenience and custom have sanctioned the designation of certain types of disease of the nervous system by the anti-theoretical terms "organic disease" and "functional disease," and while these may define the extreme types, yet they do not adequately nor satisfactorily cover the transitional states of disease between them.

Between these two extremes, there is every conceivable gradation, and the necessity for a proper distinction constitutes a general diagnostic problem of the highest importance, for while organic disease is concerned with processes that involve actual destruction or alteration of tissue with limited power of repair, functional disease consists of disorders of function and nutrition with practically unlimited possibilities of recovery.

Likewise, in this latter class, also, there are many variations, ranging from those in which the nutritional changes may be negligible to those in which they may be profound, even sometimes reaching the point where slight alterations in structure may make their appearance.

In addition to this disordered function that may be dependent upon a beginning alteration in the nutrition of nerve-elements, there is also at times other modifying factors and influences, such as heredity, environment, personal temperament, etc., that complicate the rational solution and future treatment of the case in question.

So varied, consequently, have been the different theories regarding these borderline functional cases, that many terms have been used to designate the morbid processes, some observers actually re-

garding them as a disease entity per se, and others denominating them as Psycho- or Neuro-, or both, according to the inherent psycho- or neuro-pathic disposition of the patient.

While strictly speaking, a functional disease is a derangement of function without a pre-existing alteration in nutrition, yet the cases that actually belong to this class are probably very few, and experience teaches, especially with improved chemical and microscopical technique, that this category is becoming more and more restricted, and yet there still remains a goodly company which until more exact scientific knowledge shall enlighten us, must be designated, for the want of a better phraseology, Psycho-Neuroses of the Nervous System.

This nomenclature, however, is but an apology for our ignorance, and yet it excites our scientific curiosity to inquire into the functional nature of a disorder, especially when it has no apparent organic cause, and it is for this reason that I have invited your attention to this class of cases, in their relation to chronic infections, in order that we may determine if some of what are now considered to be entirely functional cases, may not be caused by, or dependent upon, existing systemic infections.

The pendulum of scientific thought and speculation swings sometimes too far, and because numbers of organic diseases have been overlooked, and neurasthenia and rheumatism, has been made the conthenia, like neuralgia, influenza, malaria venient dumping ground for careless diagnosticians, many practitioners have been led to believe that all so-called functional diseases are really based on organic disease.

It is true, and must be admitted that there is a considerable number of morbid conditions, however, that are apparently functional, and just as a preponderance of symptoms has appeared to be psychological or physical, they have been designated cases of Psychasthenia, or cases of Neurasthenia, but this does not adequately describe their manifestations, nor explain their etiology.

Consequently, the problem of the Psycho-Neuroses is a complicated one, and involves not only existing disease-expressions, but also the personal abnormal psychology of the individual patient. How much of the one or the other originates in the mind or body in some of these cases, appears to be incapable of determination, for not even the most learned psychologists know the exact

*Read before Virginia Medical Society at Washington, D. C., October 28, 1914.

relationship of mind and body.

Practically speaking, however Psycho-Neuroses are disorders of the Nervous System which are functional in character, and have either a psychogenic or somatogenic basis according to the inherent temperament and environment of the individual affected. In the study of them, the interesting point for determination is the relative preponderance, as it were, of the innate psychical or acquired physical element in the case under consideration.

This is no easy task, and statistics are perfectly valueless upon this question, because everything depends upon the experience and the knowledge of the person making the diagnosis.

Time was, and not more than a decade or two ago, when it was the fashion to describe every psycho-neurosis as a reflex from some non-nervous organ, and if disease, either primary or coincident, for example, of any of the thoracic abdominal or pelvic viscera was found, the mental symptoms were supposed to be thoroughly explained, for the medical world has no heredity of training in diagnosing nervous diseases.

Indeed, if these abnormal nervous conditions are to be thoroughly understood, it must be admitted that in the great majority, there is an inherent personal psychopathic element that must be considered and properly valued.

These psychopathic elements and conditions are legion, and may occur singly, forming an imitation of morbid entities, such as Psychasthenia, neurasthenia, hysteria, hysteroneurasthenia, hypochondria, melancholia, and conditions of nervous unbalance and degeneracy, as well as disturbing elements in the symptomatology of many surgical and medical diseases, and in fact, in human suffering under all its forms and in all its degrees.

The psychoneurotic, properly speaking, has no physical suffering; it is always psychic, even when it results from a traumatism or an anatomical lesion.

The patient himself is aware of this, but oftentimes the physician, impressed with his role as physician to the body alone, is unmindful of these mental changes which are often very serious, and which much more frequently than organic troubles, destroy the happiness of individuals and of families.

Instead of interesting himself in the mental life of his patient, the physician is frequently found hunting among the different organs of the body for the cause of all these psychic and nervous troubles,

overlooking the fact that the nervous manifestations may be, and often are preeminently psychic in character.

The brain interests the average physician only when there is hyperaemia or anemia, hemorrhage or thrombosis, meningitis or tumors, but when it is affected only in its functions, the unfortunate patient is too readily transferred to the alienist for diagnosis and treatment.

In addition to these neuroses of purely psychic origin, there is undoubtedly a small group of somatogenic neuroses that bears important relations to chronic infections, but in a careful examination of a very large number of suspected cases, extending over some years of private and referred practice, it has not been my fortune to positively incriminate special infections as directly causative of the psychopathic conditions in as many cases as I expected. This has been the more astonishing to me, because I have been ever ready to accept such a solution.

The uterus and its adnexa has had the honor of being the most frequently under suspicion, particularly when some form of hysterical nervousness was under consideration, but I do not think that lesions in this locality are any more prone to act reflexly than lesions of other non-nervous organs except so far as they act psychically, because every woman is only too prone to believe that every uneasy feeling is due to a uterine or pelvic disorder, and if this opinion is confirmed by some attending physician, it but adds a certain satisfaction to her increasing mental torture.

Likewise, there is no necessary relation between pelvic disease and hysteria, or pelvic disease and neurasthenia, even when the two affections coexist in the same case, and while occasionally surgical intervention may be demanded for other reasons, still it cannot be expected that it will be curative in a rational way of the existing nervous state.

It was an old delusion that removal of the ovaries would cure Epilepsy in the female, but there is not a case upon record in which Epilepsy has been cured by such an operation, or by any operation upon the female pelvic organs.

Diseases of the male urethra, seminal vesicles, etc., have been supposed to play as large a part through chronic infections in the causation of psychoneuroses as the pelvic lesions and infections of the female, but the one belief seems as much due to defective observation as the other.

The absorption of toxins from the blood in some of the exhausting diseases

of the internal organs is undoubtedly an infective cause at times of the psycho-neuroses, but the concomitant anemia is quite as often an effect as a cause in such cases.

The disturbances of gastro-intestinal function due to absorption of toxic substances, in conjunction with dilatation of the stomach, or ptosis of some of the abdominal viscera, is in my experience an undeniable cause of vascular infection and consequent psychoneurotic manifestations in many clinical cases.

The supposed infection from arthritic diseases has never proved to be the cause of psycho-neuroses in a large number of such cases that have come under my observation.

Chronic infection, however, as a result of *Pyorrhea Alveolaris* has appeared to be the source of a considerable number of psychoneuroses that have been studied in the past two years, when more attention has been paid this infectious condition, but sufficient time has not yet elapsed to be assured that the primary infection has been cured, or that there will be no recurrences.

Chronic infections of the gall-bladder tract have been associated with a small number of coincident psychoneuroses that have been treated, but the resultant effects have not been sufficiently conclusive to warrant an opinion as to whether their association was accidental, or otherwise.

In this enumeration, psychoneuroses having as their genetic factors alcohol and syphilis have not been considered, for many of these have congenital tendencies.

Sufficient cases have been studied, however, to prove first, that the large majority of Psycho-neuroses are of purely psychic origin; second, that a small percentage is due to chronic infections; third, that the treatment, to be efficient, must vary with the cause.

Enlargement of the Prostate: An Operation Less Dangerous Than the Catheter.*

By G. Paul LaRoque, M. D., F. A. C. S., Surgeon
Memorial Hospital, Richmond, Va.

The method of handling the victims of prostatic hypertrophy and its serious effects upon the urinary organs, presents to the attending doctor, problems necessitating careful consideration of first, the dangers of the disease, second the dangers of the treatment.

The dangers of the disease have always

*Read before the Seaboard Medical Association, Goldsboro, N. C., December 10, 1914.

been and will continue to be the same: progressive hypertrophy of the gland, progressive elevation of the posterior urethral orifice and neck of the bladder, progressive atony with thickening and dilatation of the bladder, hydronephrosis and kidney break down, infection of the prostate, bladder, ureters and kidneys, vesical calculi and malignant disease, all the pernicious effects of urosepsis, distressing pain, loss of sleep, and the final breaking down of the patient's general constitution plus the intensification of cardio vascular sclerosis incident to old age. No one expects prostatic hypertrophy to subside spontaneously and patients do not have to be advised to seek treatment, they demand it.

For many years the only treatment which would produce even temporary urinary relief, with a minimum risk of immediate death, was the use of the catheter. The dangers of the catheter have always been the same, namely traumatism followed by infection of the urethra, prostate and bladder. Occasionally the end of a catheter will remain in the bladder as a foreign body. In the olden days the patient applied the catheter treatment carrying the instrument around with him in his hat band, and using it as necessity demanded. The necessity for asepsis caused doctors to use the instrument more or less systematically themselves, and to teach patients the principles of surgical cleanliness. In spite of the catheter, certain cases have always been the victims of retention of urine and inability to introduce the catheter on account of temporary engorgement of the prostate. In former years, and this was not long ago, when the introduction of the instrument was impossible, suprapubic puncture of the organ was made and a fistula established. Until just a few years ago such palliative treatment was the best to be employed because the disease and this treatment were less immediately dangerous than radical operation directed to removal of the gland.

With such a disease and such a treatment of one complication, retention of urine, by the addition of another, catheter traumatism and infection, the progress must inevitably be toward death, and if these old patients can live long enough, they all die from the direct effects of prostatic hypertrophy or of the use of the catheter. Think of it, 100 per cent. mortality within less than four years; 66 2-3 per cent. within two years and eight months (Squier.)

Apart from the crippling effect and the dangers to life of ordinary benign senile hypertrophy of the prostate, there are certain complications present in a sufficiently large percentage of cases, of themselves to demand surgical treatment. About 25 per cent. of the cases, for example, are complicated by stone, either in the bladder or sometimes in the prostate itself. It is estimated that from 10 to 20 per cent. of cases, if allowed to progress, will undergo malignant changes and become cancer. Every case in which the catheter is employed will be complicated by inflammation of the gland, and this is followed by inflammation of the bladder, ureters, kidneys and other regional structures. Recurrent attacks of epididymitis occur so frequently that patients are never surprised at its development. The increased blood-pressure produced by the straining efforts at urination and vesical tenesmus intensify an already existing arterio-sclerosis and cause dilatation of the heart. Interstitial nephritis is made worse in every case. Inguinal hernia and hemorrhoids when they exist coincidentally, are made worse and sometimes they are believed actually to be caused by the straining resulting from urinary obstruction.

All of us see the victims of the catheter habit die within two or three years from the beginning of its employment. Such mortality when considered with the morbidity incident to urethral chills, pain, bleeding, loss of sleep and general debility, convince us at once that such palliative treatment does not palliate, but is distinctly harmful. When the situation is conscientiously studied any one who has handled many of these old gentlemen and seen them go from bad to worse under the catheter life, will fully realize that the catheter, to prosthetics, is a dangerous instrument. Its ability to give temporary relief from a distressing situation, to be repeated within a few hours, constitutes no valid excuse for failing to advise that the patient be cured of his trouble.

Since the modern operative treatment of these cases, based upon technique which is satisfactory, and guided by surgical judgment which permits dealing with a handicapped patient in a way to get perfect results, operative treatment of prostatic hypertrophy can be easily demonstrated to be attended by much less actual mortality and infinitely less morbidity than any so-called palliative treatment. Under these circumstances, it is quite proper for us to claim and

advocate the radical curative treatment of prostatic hypertrophy as less dangerous, less distressing, less time-consuming and more humane than the repeated use of the catheter.

An ordinary case of prostatic hypertrophy presents three clinical stages in its development. The earliest stage is characterized by moderate enlargement and a small amount of residual urine necessitating frequent calls to empty the bladder day and night. In this stage the gland is only slightly enlarged and this is the ideal time for operation.

The second stage is characterized by an intensification of these symptoms and occasional attacks of retention of urine incident to sudden change of the weather from warm to cold, a few drinks of beer or other alcoholic beverage, constipation and many other so-called "little things" which precipitate retention of urine, nature's pleading for operation. If the patient in this stage gets sick with any incidental affection, his condition at once becomes critical. In this stage of hypertrophy, operation should be urged as necessary for the cure of the disease and less dangerous than the so-called catheter life, or more appropriately, catheter death.

The third stage of the disease is characterized by partial or complete retention of urine necessitating the frequent use of the catheter. In this stage all cases are infected. I have for a long time contended that the infection is first of the prostate gland. This however soon extends to the bladder and is accompanied by urethritis. The infection sooner or later involves the entire genito-urinary apparatus. The patient is now in a condition of very grave danger to life and unless handled with the greatest care and sound judgment, is liable to die from almost anything. Bronchitis, uraemia, apoplexy, pneumonia, plain ordinary sepsis, may take them off and the doctor's conscience may be soothed with the thought that death was not directly due to the prostatic disease, but to "a complication of diseases." At any rate the patient is entirely dead, much more completely so than if he had been operated upon, and much sooner.

Operation in the early stage of the disease apart from the indication based upon the pathology, are very positively preventive of complications of the disease and the necessity for operations of gravity in older and less tolerant subjects, and bears the same logical relation to the treatment of old men the victims of hypertrophy, as does vaccination in

the prevention of small pox or the administration of antitoxin in the prevention of diphtheria.

Operation in the second stage is absolutely indicated for the very sensible reason that the modern operation is definitely curative and when compared with the disease or with the use of the catheter, is considerably less dangerous.

Radical operation in the third stage of the disease need not be necessary if it is performed in the first or second stage. Patients in the third stage, through preliminary suprapubic cystotomy and drainage, can often be cured of their infection and placed back in the second stage, so far as the gland and urinary organs are concerned. Suprapubic cystotomy is a much safer operation than the frequent or continued use of the catheter, can be performed painlessly under local anaesthesia, (and this cannot be said of the introduction of the catheter,) the drainage is complete, the bladder and prostate placed at rest and protected from traumatism. As a rule when this is done, within a variable length of time, depending upon the severity of the complications, the patient can be placed back in the second stage of the disease so far as the gland, bladder and kidneys are concerned. If the patients are too old, the sepsis is too severe and the kidney function too much impaired, this is all the operation that can be safely performed. Even in this condition, however, they are more comfortable and subject to less danger through cystotomy than they are through the continued use of the catheter.

After making the diagnosis, which is so easily done, even by casual examination, it can scarcely be questioned that our duty is to advise radical treatment. The modern technique of the radical operation for the removal of the gland has placed the operation itself in a class which but for the age of the patient, could very properly be considered a minor operation, and in spite of the age of the patient, if the case has not been complicated by sepsis incident to the use of the catheter, patients are usually very good risks for the modern, simple, easy and quickly performed operation with a mortality in the hands of a qualified surgeon of less than 5 per cent. complete cure and living more than four years, 87 per cent. (Squier.)

The technique devised by Squier of New York has simplified and facilitated the operation so much that it can be justly claimed and the figures conclusively

show, that this method of prostatectomy is less dangerous and should be unhesitatingly advised as preferable to the continued use of the catheter.

We have treated all cases during the past three years by this technique with uniformly good results in every case which could have been benefitted by any procedure. We have had one death following the operation, probably due to apoplexy, in an old negro the victim of uraemia and sepsis because of catheterization.

The technique of the operation need not be elaborated here. Qualified surgeons, the world over are sufficiently familiar with it. The essential principles in Squier's technique include a high incision in the bladder and intra-urethral enucleation of the gland. Personally I make a transverse incision of the skin and fascia, a vertical separation of the muscles and fat in the suprapubic space of Retzius and a transverse incision of the bladder at the highest point. With the index finger of the right hand inserted into the posterior urethral orifice until the triangular ligament is felt, the roof of the prostatic urethra is punctured and the finger comes at once between the two lobes. The line of cleavage for enucleation can always be felt and there can be no error for the finger has not come in contact with the so-called "false capsule" wherein are located the blood vessels. By enucleating in this manner from the urethra to the bladder, the gland is completely removed without tearing the false capsule nor any blood vessel of size. Bleeding is never excessive and a little hot irrigation from the meatus washes out the material from the bladder and at once checks the oozing. A drainage tube is sewed into the wound for two or three days, after which it is removed and the dressings are kept dry by frequent changing.

The operation thus described requires from ten to twenty minutes from the time the incision is made until the dressings are applied. All but the actual enucleation of the gland can be done under local anaesthesia and while the suprapubic incision is being made, the patient can be put under very light ether or gas anaesthesia. It requires five minutes or less of light general anaesthesia while enucleating the gland.

A very important practical point worthy of strong emphasis is the necessity for doing the operation in two stages in those cases complicated by sepsis. When we get the patient before the catheter

complication has arisen, a complete operation can be done at one sitting.

An essential part of the treatment of every case is the employment of a special nurse who is interested in this kind of work. The patient's bladder can be irrigated by way of the kidneys by causing him to drink large quantities of water by mouth. Sometimes it may be introduced into the bowel, but the proper nurse will cause them to drink the water. No old man's habits should be radically changed. Ample bed clothing must be provided, regular meal hours observed, the same kind of tobacco and liquor to which they may be accustomed must be provided, and above all, they should not be permitted to take cold. This is no time to convert a patient from warm room ideas into a fresh air fiend. We always plead with the patient's family doctor for advice in treating the patient and when his home doctor is not accessible, we secure a competent physician to attend the patient during the entire period of preliminary and post-operative treatment. They do not need much treatment, but they do need careful watching, abundant boosting and good nursing.

501 E. Grace St.

**Data Obtained Through Correspondence
with Nine-Hundred General Practitioners
and Surgeons Relative to
the Diagnosis, Treatment and
Classification of Acute Appendicitis,
and the Views
of the Author.**

By Frank D. Smythe, M. D., F. A. C. S., Memphis, Tenn.

During the month of June I addressed eight hundred general practitioners of Memphis and contiguous territory a card upon which was printed the following seven questions, accompanied by a letter requesting the Doctor to answer the questions and return the card to my address. Three hundred replies were received and the answers to the questions are herewith appended.

QUESTIONS AND ANSWERS.

1. What plan of management do you adopt as a matter of election when called to see a patient suffering with Acute Appendicitis?

Sixty-two per cent. of the general practitioners advise early operation, considering the disease a surgical one.

2. Do you approve of or do you prac-

tice the Expectant Plan of treatment in the absence of Alarming Symptoms?

Thirty-five per cent. of the physicians as a matter of election treat the disease in accordance with the so-called expectant plan.

3. Do you advise operation in cases of Appendicitis that progress Unfavorably under Medical Treatment after a period of one or more days?

Ninety per cent. of the gentlemen addressed advise operation in cases of Acute Appendicitis that progress unfavorably under medical treatment after a period of one or more days. Sixty-two per cent. practice the expectant plan of treatment as long as the case in their opinion pursues a satisfactory course though they do not consider it the best nor safest method of treating the disease.

4. Do you consider: (a) Appendicitis a Medical Disease? (b) A Border Line Disease? (c) Or essentially a Surgical Disease?

One per cent. were of the opinion that the disease should be treated by medical measures only, regarding it as a medical disease.

Twenty-nine per cent. were of the opinion that the disease may be either medical or surgical, and state that it is their custom to treat all cases medically in the absence of the development of unfavorable or alarming symptoms. In the event of the development of complications it then becomes a surgical disease in their opinion.

Seventy per cent. regard acute appendicitis as strictly a surgical disease from its inception.

5. If a Surgical Disease, what, in your opinion, is the best time for Operation to be Performed?

Seventy per cent. advise operation in acute appendicitis cases as early as possible after diagnosis is made, and urge that it be performed certainly within the first 48 hours after onset of attack.

Twelve per cent. stated that they regard the disease as strictly a surgical affection and believe that every case of appendicitis should be operated upon but were opposed to operation in primary cases, preferring the interval operation or as early as possible after onset of exacerbation.

6. Would you, or would you not, be Operated upon in case you had Acute Appendicitis, provided a Competent Surgeon was available?

Seventy-nine per cent. favor early operation upon themselves in the event of an attack of acute appendicitis, while

*Read before the Tri-State Medical Association November 16, 1914, at Memphis, Tenn.

only seventy per cent. urge operation in cases of acute appendicitis developing in their practice.

Seven per cent. stated that they would not be operated upon during the acute stage of the disease in the absence of alarming symptoms, but would be operated upon without delay if they were satisfied that the case was progressing toward a fatal issue in their own opinion.

One physician was found who would not accept any one's else diagnosis of the disease, relying on his own, though he was in favor of operation upon cases of known appendicitis.

Three per cent. replied that they would be operated upon as a last resort only. With physician entertaining such views in regard to the disease one would surmise that the cases they would refer for operation would be cases of diffuse peritonitis who had collapsed after operation and would die, and that they themselves would suffer a like fate, unless they could be protected against the error of their ways.

7. What percentage of cases in your Practice having experienced an attack of Acute Appendicitis cease to afford you some anxiety as regards the ultimate outcome of the case when treated medically?

Ninety-nine per cent. stated that they were apprehensive in regard to future safety of their patients that had suffered an attack of appendicitis for the reason that they believe all such cases were more or less liable to recurrence with all the risk incident to an infected appendix.

One per cent. only replied that they gave themselves no more concern about a patient of theirs who had acute appendicitis in the event of a recovery from the attack than they did to patients recovering from any other disease.

One hundred well known American surgeons were propounded the following eleven questions, framed in such a manner as to cover practically all the points of interest regarding the subject of acute appendicitis. Some of the questions permit an answer of yes or no, others more or less at length.

QUESTIONS AND ANSWERS.

1. Name the symptoms, subjective and objective, upon which you rely in making positive diagnosis of Acute Appendicitis.

This question was answered by each one of the surgeons in a manner that demonstrates beyond any question their ability to make a positive diagnosis of acute appendicitis during the early stage of the disease, the subjective and objective

findings were in accord to such an extent that either of the answers given might be adopted as a model to be followed by the general practitioner with every assurance that if pursued in accordance with the plan laid down they will be able to arrive at a diagnosis of the disease promptly and correctly.

EXAMPLE.

A. Pain, sudden, more or less severe, usually in the epigastrium, or umbilical region at the outset, and may or may not become general.

B. Nausea, vomiting.

C. Local sensitiveness, which may vary considerably as to degree and location.

D. Elevation of temperature.

E. Leucocytosis.

F. Rigidity of the rectus in region of appendix, may become general early.

G. Increased tenderness upon pressure over the appendix.

These symptoms occurring in the order mentioned, in the absence of history of some other type, such as gastric or duodenal ulcer, gall stones, tubercular peritonitis, torsion of pedicle or ovarian cyst, pyelonephritis, etc., are ample upon which to base a diagnosis.

2. Have you ever made a positive diagnosis of Acute Appendicitis as long as twelve hours after initial symptoms that was not confirmed at operation?

The ability to arrive at a correct diagnosis of Acute Appendicitis during the early stage of the disease is positively shown in practically all cases. The errors made in diagnosis were due to symptoms incident to perforation of some of the hollow viscera, which were lesions that justified immediate operation.

Dr. Murphy reported a case of acute luxation of the right kidney, which was detected by the surgeon and operation was not performed.

3. Have you ever seen a case of Acute Appendicitis, uncomplicated, that you failed to diagnose as such within twenty-four hours after initial symptoms?

Practically no errors were made in cases of Acute, Uncomplicated Appendicitis within twenty-four hours after onset of symptoms.

4. Have you lost a single case of Acute Appendicitis that was operated upon within twenty-four hours after onset of symptoms—not twenty-four hours after diagnosis.

Five of the surgeons replying state that they had lost 1 case each of Acute appendicitis operated upon within twenty-four hours after onset of symptoms.

1. A child 8 years of age who developed acidosis died.

2. A baby 8 months old died of streptococcic septicæmia.

3. A case of perforative appendicitis and peritonitis.

4. A case of acute gangrenous appendicitis, streptococcic, with peritonitis.

5. A case of appendicitis—cause of death not stated. All the remaining surgeons answered in the negative, that is, they had not lost a single case of acute appendicitis operated upon within twenty-four hours after onset of initial symptoms. The record is conspicuous and very interesting for the reason that not a single death has resulted from operation where the pathology at the time of operation was limited to the appendix. All the cases that succumbed following operation were cases of perforative appendicitis and were cases of peritonitis more or less diffuse and not cases of uncomplicated acute appendicitis.

5. Is it your opinion that each and every uncomplicated case of Acute Appendicitis should be operated upon as soon as diagnosis is made, provided a competent surgeon be available?

In answer to question 5 all but one stated that each and every case of uncomplicated acute appendicitis should be operated upon as soon as possible after diagnosis is made, and were positive in the declaration that operation done by a competent surgeon was the safest method of treating the disease. One surgeon stated in a very mild case a chance might be taken—no reason for his opinion was given, nor did he deny the fact that it is impossible to tell in a given case whether the case is really safe or dangerous—in the absence of operation.

6. Have you ever had a case of Appendicitis referred during the early stage of the disease that in your opinion was injured in any way directly as results of the trip to the hospital?

One hundred per cent. of the surgeons answered this question in the negative. Many believe that rupture of an abscess might occur during the trip, but could not tell that such rupture was the results of the trip alone. Many of them state that diffuse peritonitis was aggravated by the trip.

The author does not think that a patient should be moved after the disease has reached the stage of diffuse peritonitis.

7. What percentage of patients die of Acute Appendicitis treated Medically?

In answer to question 7 in regard to the percentage of deaths as result of

Acute Appendicitis the following statistics were received.

Thirty-three of the surgeons upon my record said they could not state the exact mortality incident to the disease but the majority of them answered that the mortality is very high. Seven replied they did not know, however, that the mortality is "very,very high," if not as result of primary attacks ultimately from exacerbations and complication incident to the original infection.

Nineteen of the Surgeons replied as follows, placing the mortality:

2 at 10 per cent.

1 at 12 per cent.

1 at 12 per cent.

1 at 16 per cent.

1 at 18 per cent.

5 at 20 per cent.

2 at 25 per cent.

1 at 30 per cent.

1 at 40 per cent.

4 at 50 per cent.

So from the statistics of the various sources we have the general average of about 30 per cent.

8. What has been your mortality rate with Acute Appendicitis (Primary) cases operated upon within the first twenty-four hours after onset of attack? Forty-eight hours after onset of attack? Seventy-two hours after onset of attack?

All but 5 of the surgeons state that they have never lost a case of acute primary appendicitis operated upon within twenty-four hours after onset of attack. Cause of death in the 5 cases that died explained in answer to question 4.

Mortality within the 48 hour limit varies from one half of one per cent. to 10 per cent.

Mortality rate at 72 hours varies from one and one half per cent. to 40 per cent.

9. Do you believe that the medical attendant should be held blameless who treats a case of known appendicitis medically, in the event of a fatal issue, where he has not advised immediate operation?

Answers to question 9 show, with the exception of 5, that every surgeon is of the opinion that the attending physician who treats a case of acute appendicitis medically in the event of a fatal issue, where early operation was not urged, should not be held blameless. However, if early operation was urged but refused by the patient that the physician conducting the treatment of the case deserves our approval and sympathy and not our censure.

The 5 surgeons that voted to the effect that the physician treating a case of acute

appendicitis in the event of a fatal issue, where operation had not been advised, without exception advocate early operation in all cases and stated that they themselves would not be a party to the medical treatment of such a case.

10. In your opinion does the interest of a patient suffering with an attack of Acute Appendicitis justify that immediate operation be urged, or has a physician discharged his full duty when he simply advises operation for an essentially surgical disease and continues to treat the case medically?

Every surgeon answered in the affirmative to the first half of the question, that is, that early operation should be urged, and stated that in their opinion acute appendicitis being strictly a surgical disease that the attending physician should not content himself with merely advising operation, which does not give the patient the same opportunity of deciding his or her possible destiny that a physician has who is intimately acquainted with the facts and suffering with the same trouble.

One only of the number is of the opinion that the physician has discharged his full duty when he simply advises operation as being the safest method of treatment. He admits, however, that the disease is strictly surgical.

11. If called in consultation to see a patient suffering with Acute Appendicitis would you feel that your duty was being discharged by becoming a party to further medical treatment, should the patient decline early operation?

Answers to this question shows that all but 8 of the surgeons state positively that were they called in consultation to see a patient suffering with acute appendicitis they would advise early operation and would withdraw from the case at once if their advice was not accepted leaving the patient in charge of the attending physician.

The 8 surgeons who stated that they would continue to visit a case of acute appendicitis declining operation, if the patient desired them to do so, declare they would urge early operation and explain fully the dangers of the disease in the absence of operation, and the patient would of course have to assume all the responsibility of the outcome.

The evidence submitted by my distinguished co-workers in this field, wherever situated, is voluminous, all testifying without scarcely a dissenting voice, and leave no doubt in my mind, and should leave no doubt in the mind of any

member of this association, provided he has confidence in the honesty and inability of the witnesses.

The following gentlemen replied to my request for assistance in the preparation of this paper and my appreciation and thanks are hereby acknowledged. Drs. F. G. Hodgson, H. H. Young, Reuben Peterson, and J. C. Wendill, are now specializing along other lines and do no general surgery and so stated in their letters.

SURGEONS.

H. J. Boldt, R. B. Hall, Stewart McGuire, J. W. Barksdale, Henry O. Marcy, J. K. Simpson, E. M. Holder, W. Kohlman, E. S. Jones, W. P. Carr, Raymond Turk, J. W. Long, William Bartlett, W. M. O'Brien, A. B. Cook, Albert W. Finley, E. J. Ill, H. A. Royster, W. C. Bowden, Robert T. Morris, Frank Martin, Reuben Peterson, J. C. Wendill, Robert C. Bryan, F. G. Hodgson, J. Garland Sherrill, H. H. Trout, George W. Crile, William R. Jackson, C. S. Watkins, H. H. Grant, J. M. Mason, W. C. Cowden, J. M. Baker, John M. Maury, J. D. S. Davis, J. A. Crisler, H. S. McLean, R. S. Payne, A. S. Gibbons, J. E. Carmody, A. Vander Veer, G. W. Hendon, Edwin Walker Irwin Abell, F. W. Parham, T. C. Witherpoon, A. J. Buit, J. C. Bloodgood, Bacon Saunders, Hugh H. Young, S. S. Gale, R. C. Coffey, Ernest S. Lewis, John B. Murphy, Howard H. Kelly.

In addition to the names given I have unsigned letters from Memphis, Savannah and Atlanta, Ga., Birmingham, Ala., Cleveland, Ohio, and Richmond, Va.

Having obtained the opinions of the profession in Memphis and this territory and that of a number of prominent American surgeons regarding the diagnosis, classification and treatment of acute appendicitis, extracts from the following well known clinicians and authors of text books on the principles and practice of medicine and systems of general medicine are included in this report:

OSLER.

Principles and Practice of Medicine 8th Edition—1912. Page 537 is found the following:

Prognosis, there would be no percentage of deaths from appendicitis if every case commencing with acute pain and developing tenderness and rigidity of abdomen and quickening of the pulse were operated upon within 12 hours. (Rutherford Morrison.)

Treatment—Gradually the profession has learned to recognize that appendicitis is a surgical disease. In hospital practice the cases should be admitted

directly to the surgical wards. Many lives are lost by temporizing and the general practitioner should remember whether his leanings be toward the conservative or radical methods of treatment,—that the surgeon is often called too late, never too early. There is no medical treatment of appendicitis. There are remedies that will allay pain but there are none capable in any way of controlling the cause of the disease. Rest in bed, a light diet, measures directly to allay the vomiting—upon these all are agreed. The practice of giving opium in some form in appendicitis and peritonitis is decreasing but is still too common. Surgeons almost unanimously condemn the practice as obscuring the clinical picture and tending to give a false sense of security, and since they, the surgeons, control the situation we should not give opium and trust to the persistent use of ice locally to relieve the pain. General opinion among the best surgeons is, I believe, opposed to the use of saline purges.

Operation is indicated in all cases of acute inflammatory trouble in the cecal region, whether tumor is present or not, when the general symptoms are severe and when at the end of 12 hours or even earlier, the features of the case point to a progressive lesion. The mortality from early operation under these circumstances is very slight.

ANDERS.

"With rare exceptions, prompt surgical intervention should be recommended."

ALFRED STENGAL IN OSLER'S MODERN MEDICINE.

"Medical men, as well as surgeons, recognizing that it is often impossible to determine when an apparently benign case will terminate in sudden extension or rupture, with the development of peritonitis, believe that it is usually wiser to regard every case of appendicitis as demanding surgical treatment."

DEJULAFÖY.

"There is no medical treatment for Appendicitis. Medical treatment simply causes loss of valuable time. It is obvious that the patient can be relieved by the injection of morphia, application of ice bags, to the affected region, and other soothing measures; but do not let us be mistaken as to the efficacy of these means. Too often they lead us to believe in cure, when they have only masked the symptoms. In view of this fictitious improvement, we speak of typhlitis, or appendicular colic, and prophesy a recovery; but yet the patient dies for want of proper

surgical intervention. Cases of grave appendicitis operated upon in the first 48 hours have almost all recovered."

As several physicians that replied to my questions stated that they followed the Ochsner plan of treatment in cases of acute appendicitis, I deemed it necessary to quote from that famous surgeon's original contribution to the section on Surgery and Anatomy of the A. M. A., June 4-7, 1901, at St. Paul.

Much damage has been done, many lives have been lost, by physicians carrying out a plan of treatment originated by Ochsner and practiced by him in the treatment of diffuse peritonitis. Deaths resulting from peritonitis that had been subjected to his method of treatment for peritonitis during the early stage of acute appendicitis should not as a matter of justice to Ochsner be charged to his treatment of appendicitis.

"Quoting from Ochsner's article every surgeon who treats patients suffering from acute appendicitis must be impressed with the fact that an unfavorable outcome in any case means the infection was originally confined to the small space occupied by the veriform appendix itself, has first invaded the tissues surrounding this organ and then distributed over the entire peritoneal cavity. In other words, in fatal cases the patient practically always dies as result of diffuse peritonitis."

No patient ever died directly as result of an infection limited to the appendix.

Ochsner says, "The prevention of diffuse peritonitis can be accomplished if the appendix is removed during the very beginning of the attack, before the infectious material has passed beyond the walls of the appendix."

"Cases encountered within the first thirty-six hours after the beginning of an attack, or in case of the formation of a superficial circumscribed abscess." Such cases are cases that demand in the interest of the patient, operation as early as possible. All such cases are operated upon by Ochsner, just as other surgeons, as early as possible with the hope of removing the appendix while the pathology is confined to that organ.

My experience during the past 16 years is corroborative of that of the surgeons submitting evidence in this cause. In a series of more than a thousand cases no death has resulted in a case operated upon where the disease was limited to the appendix at time of operation, nor have I lost a case operated upon within the first 24 hours after onset of symptoms; nor do I recall a case that was

diagnosed as acute appendicitis during the first few hours after onset of disease that was not confirmed at operation, was performed, with a single exception, that was a case intra-abdominal torsion of the greater omentum and was the first case of the kind reported in American literature, was published in the *Journal of Surgery, Gynecology and Obstetrics*, and was the first case that I had ever seen or heard of.

A mistake in diagnosis was made on that occasion though the man's life was saved as a result of the timely operation.

From the foregoing views entertained regarding the subject of acute appendicitis by the general practitioners of Memphis and contiguous territory; the great clinicians, and accepted authorities and authors of text books on medicine and editors of systems on medicine, supplemented by the opinion entertained by the American surgeons and surgeons everywhere plus my personal experiences with the diagnosis and treatment of the disease, I am prepared to submit the following conclusions:

First.—That Acute uncomplicated appendicitis is strictly a surgical disease.

Second.—That a positive diagnosis of acute uncomplicated appendicitis can be made by the average clinician within 12 hours after onset of attack, certainly within 24 hours. The great majority of cases are diagnosed earlier than 12 hours after the initial symptom, pain, is experienced.

Third.—Symptoms sufficient, subjective and objective, to base a diagnosis upon are: (a) Pain, sudden in onset, appearing first epigastrium, as a rule, may become general, localizing more or less early in the region of the appendix; (b) Nausea, with or without vomiting; (c) Elevation of temperature; (d) Rigidity of right rectus; (e) Tenderness upon pressure over the appendix; (f) Leucocytosis; Of course the possibility of other lesions existing producing symptoms somewhat in common with those of appendicitis must be reckoned with, most of which are, kidney and ureteral stones, chole lithiasis, gastric and duodenal ulcers, pyelonephritis, and torsion of the pedicle of an ovarian cyst, pus tubes. History of the case, with a careful examination of the patient would prevent error in practically all cases.

Fourth.—That since we have no record of deaths resulting from acute appendicitis, uncomplicated, that was operated upon within 24 hours after onset of attack that we are justified in assuming that the risk

incident to the disease if operated upon is practically nil, and that it is our duty to the patient to urge early operation in all such cases.

Fifth.—That a patient suffering with acute appendicitis during the early stage of the disease may be transported to the hospital with perfect safety. No record of a case that sustained the slightest injury during that period incident to the trip to the hospital.

Sixth.—Information from all sources at my command warrants the statement that from 8 to 10 per cent. of patients suffering with acute appendicitis treated medically die of the disease during the first attack, and that a very large majority of those experiencing relief from the first attack has exacerbations, or so-called recurrent attacks, thus further increasing the death rate of the original attack of appendicitis, ultimately fifty per cent. die or remain more or less ill in consequence of the diseased appendix until operated upon.

Seventh.—We are justified in promising relief following operation in one hundred per cent. of cases uncomplicated, during the first twenty-four hours of the disease, with a mortality rate of less than one per cent. in cases operated upon during the second day of the attack.

The mortality that does occur following operation in the vast majority of cases is where operation was delayed longer than 48 hours. Death in such cases is due to diffuse peritonitis resulting from perforation of the appendix occurring prior to operation and should be classified as a medical death.

Eight.—That the medical attendant should not be held blameless who treats a case of known appendicitis medically in the event of a fatal issue where he failed to urge early operation it being the safest plan of treatment of acute appendicitis.

Ninth.—The evidence is in favor of early operation in cases of acute appendicitis is so overwhelming from both surgeons and internists that a physician's duty has not been fully discharged to his patient when he simply advises operation, situated as he is, and being perfectly familiar with the disastrous consequences often incident to delay, and the patient being entirely ignorant of the consequences he should urge his patient to accept the operation, entertaining the hope that he will accept operation while the disease is limited to the appendix, with no risk incident to its performance, and with almost a certainty of recovery

in the event of timely operation.

Tenth.—That it is the duty of a surgeon when called in consultation to see a case of acute appendicitis to withdraw from the case should he advise early operation, and his advice be not accepted, leaving the case in charge of the medical attendant. It is understood that the attending physician is not in position to withdraw from the case, even though he had advised and insisted upon operation and his patient declined operation.

The character and abundance of evidence introduced from all sources fully warrants the classification of acute appendicitis as strictly a surgical disease and that it should in the interest of the patient be treated as such in the past; and I further believe that the principal factor responsible for the difference of opinion entertained by different physicians in regard to the subject is the fact that both the medical and surgical departments of our medical colleges have been teaching medical students the methods of diagnosis and treatment of acute appendicitis. Another factor is that the literature on the subject is found both in text books on surgery and text books on the principles and practice of medicine, and as the medical student is not always able to differentiate the fine points made by the teachers of the respective departments leaves college entertaining the opinion that acute appendicitis may be either a medical or a surgical disease. In that frame of mind he enters the sick room to find a patient suffering with the disease and unless he is impressed at once, from the severity of the symptoms, that the patient is in immediate danger, is likely to adopt the so-called expectant plan of treatment of the malady and is awakened to the true knowledge of the situation only after the sacrifice of one or more lives.

The remedy offered by the essayist for the removal of the obstacles to a no death rate in acute appendicitis cases is:

First.—That the general practitioner, wherever possible, accompany his cases of acute appendicitis to the surgeon and witness the operation and carefully examine the pathology after its removal. It would seldom be necessary for the general practitioner to witness but a very few such operations to convince him of the correctness of the views entertained by the surgeons concerning the proper treatment of the disease.

Second.—That the subject of acute appendicitis should be taught in the medical colleges by those teaching in the sur-

gical department only, and that the literature on the subject should be found in text books on surgery and journals devoted to the publication of articles on surgical subjects, for the reason that acute appendicitis, like fractures of bones and tumors of the breast, is strictly a surgical disease.

Third.—That a physician has no moral right to subject a patient to the hazard of delay by instituting at the outset of an attack of acute appendicitis medical treatment for a disease that is strictly surgical from its inception; for the reason that the vast majority of cases that die, do so owing to the failure of having the proper remedy applied at the proper time.

Evidence from all directions and from all sources is so overwhelming to the effect that no case operated upon by a competent surgeon has died from the disease, when operation was performed at a time when the pathology was limited to the appendix; and evidence from similar sources is to the effect that death very commonly occurs as result of the disease when treated medically, hence we are at a loss to understand how any one could as a matter of choice pursue a plan so hazardous as the medical treatment of appendicitis has proven to be when surgical treatment promptly instituted has proven almost uniformly safe and successful.

Porter Building

Two Reasons For Therapeutic Nihilism.*

S. W. Dickinson, M. D., Marion, Va.

The sick man judges his doctor by the relief he gets from his prescriptions, and the doctor judges his prescriptions by the results obtained. If the patient gets no relief he wants to change doctors, and the doctor if he gets no results wants to change drugs. If neither gets results one loses faith in doctors and drugs, and the other becomes a therapeutic nihilist. The doctor may have attended all the schools and may know all that is known, but if he does not help his patient he fails of his mission. A man sick is very practical in his demands and is likely to say as did the man about the horse, "Damn his pedigree if he can't trot."

The purpose of this paper is to call attention to two conditions tending to discredit both medicine and the prescribing physician, and also to lessen the faith of the doctor in drugs. The first claim, that our Pharmacopeia contains

*Read by title at meeting of Medical Society of Virginia in Washington, D. C., October 27 to 29.

too many and useless drugs, is not new, nor is the suggestion that very many of these so-called remedies be dropped, something that has not been done before. Garrison, in his *History of Medicine*, page 219, says, "The first edition of the London Pharmacopeia published in 1618 contained 1960 remedies, of which 1028 were simples, 91 animal and 271 vegetable," and then follows a list of curious agents now no longer classed as drugs, and, on page 324, he calls attention to how three editions of the London Pharmacopeia, during the 18th Century show gradual advance in Pharmacology. And in that for 1788, among other new drugs, castor oil and paregoric appear for the first time, and Doctor Tennant of Virginia introduced senegar while many old drugs were dropped.

Coming down to later times and to our own country, we find that the third edition of the American Dispensatory, published in 1814 and edited by Dr. John Redman Coxe, of hive syrup fame, professor of Chemistry in the University of Pennsylvania, has a sixteen page index, and an average of 95 references to the page, or about 1500 references or names in the English index. Yet we find Dr. Nathaniel Chapman on page 10 of the preface to his *Elements of Therapeutics*, published in 1823, comparing materia medica to "an inquisitive traveller, who, collecting everything which interests him on his journey, sees his baggage increase every moment in bulk and feels himself frequently obliged to stop and examine it in order to free himself from useless articles or to arrange in a more convenient order those which he cannot dispense with, that they may occupy less room and the carriage or employment of them be the more easy or commodious." If so distinguished a teacher as Doctor Chapman wrote thus at a time when the index to the Dispensatory contained only 1500 references, what would he say of our latest Dispensatory with 124 three column pages of index and about 29,000 references, 600 to acids alone. Certainly he would at once want to rearrange his baggage, for much of this is a dead load, yea, a deadly load to the medical student.

Despite decennial revisions, the number of drugs added to our Pharmacopeia has grown so large that this subject was before the section on Pharmacology and Therapeutics of the American Medical Association at the meeting at Atlantic City in June, 1912, and the opinions expressed appear to have been uni-

formly in favor of restricting the number of articles to be discussed in medical schools and improving the nature of the instruction given thereon, and that it would be advantageous to all if the Pharmacopeia could be limited to really useful drugs. In a reference to the recently issued British Pharmacopeia in the London letter of the Journal of the American Medical Association, October 17th, 1914, page 1406, it is stated as "note-worthy that the number of omissions of drugs in this edition vastly exceeds the number of additions." Would that this might be said of the next edition of our United States Pharmacopeia and that all our State Medical Societies would start an agitation to this end.

While I have freely confessed that we doctors know too little about a number of the drugs we prescribe, and have claimed as the chief extenuating circumstance our attempts to know too much, this is only one cause, and I fear by no means the least cause, of therapeutic nihilism. There is another cause which not only lessens the doctor's faith in drugs, it lessens the faith of the patient both in drugs and the doctor, and yet it is one seemingly out of the doctor's reach because recently enacted laws to regulate the practice of Pharmacy appear to have put this responsibility squarely on the person dispensing the drug; yet, it is of vital importance to doctors to know how this responsibility is being met.

In the preface to Hygienic Laboratory Bulletin No. 93, a United States Government publication, which contains a digest of comments on the United States Pharmacopeia and National Formulary for 1912, on pages 11 and 12, we find these words: "While in many foreign countries standardization and control of medicaments has long been an important function of government, the need for such control is only now slowly being appreciated in our country. The reports of the several officials entrusted with the enforcement of laws relating to the production and sale of drugs have emphasized time and again that much of the material that is now being sold as medicine in this country is either directly harmful or absolutely useless, and that from the public health point of view considerable progress is necessary before the Pharmacopeia and related books of reference can occupy the place they rightly deserve as important factors in the conservation of public health. In this connection it has been pointed out

that there is a considerable portion of every drug stock in every drug store in every state in this country that is sub-standard; particularly is this true of fluid extracts, and many other liquid preparations, not prepared by pharmacists themselves, for which there is a limited demand and which preparations, therefore, are kept on hand for indefinite periods of time, ranging from one to ten or more years." A writer in *American Food Journal* 1912 V. 7, July, page 27, claims that "preparations sent out by many of the wholesale druggists, claimed to be assayed, and which pass in interstate commerce without question, have been found to vary widely from the requirements of the Pharmacopeia."

As an illustration, see in the *Journal of the American Medical Association*, September 13th, 1913, page 858, the report of Dr. W. A. Puckner, Director of the Chemical Laboratory of the American Medical Association, table 5, on the activity of fluid extract of digitalis. This table gives the results obtained by Dr. R. A. Hatcher of examinations made by him in the Loomis Laboratory of Cornell University of samples of fluid extract of digitalis made by nineteen different drug houses, and the table shows that the "most active is four times as active as the least active." "Taking the strongest preparation as 100," the products of the next three wholesale manufacturing drug houses of supposed highest standing averaged 52 per cent., and the three highest physicians' supply drug houses averaged 58 per cent., while the 15 physicians' supply houses averaged only 45 per cent. One large manufacturing drug house, which claims to assay and standardize its drugs, not satisfied with this investigation and report, put out the statement that they make two fluid extracts of digitalis, one U. S. P. and the other their own special brand and "more reliable and active." (*Journal of A. M. A.* January 13, 1914, pages 56 and 57.) Which of these extracts does your patient get on prescriptions?

If the manufacturer is allowed by law, and I understand he is allowed by national law, to change the composition of U. S. P. preparations at pleasure, the physician never knows what quantity of the drugs he is prescribing, and our Pharmacopeia should provide, as does the British, "that the minimum degree of purity required is specified in the definition of the drug." That a drug is C. P. is no guarantee that it is U. S. P. Take

symp of the iodide of iron for instance. If made according to the old Pharmacopeia it would contain twice the per cent. of iodide of iron required by the last pharmacopeia, yet under either it might be a C. P. preparation, and the doctor with one would give twice the dose of iodide of iron as with the other. The retail druggist should dispense no preparations that are not guaranteed as standard, to conform with the requirements of the U.S. Pharmacopeia, except with the knowledge and consent of the prescribing physician; because an U.S.P. preparation is of a definite and known strength, but a C. P. preparation is not necessarily so.

As to the condition of the retail drug trade, I cannot do better than to refer you to a most interesting and timely article, "Pure Drugs and the Public Health" by Martin I. Wilbert, Assistant in Pharmacology, Hygienic Laboratory, United States Public Health Service, and published in *Public Health Reports* for May 8, 1914, page 1137, which being a Government publication, may be had at little or no cost. In this article, page 1139, he says, "The present day method of enforcing food and drug laws is hopelessly inadequate so far as offering to control, even in a moderate degree, the nature and purity of drug products as they reach the consumer." On page 1138 he says, "A compilation of the analytical reports embodied in previously published bulletins shows that out of a total of more than nine thousand samples of six pharmacopeal preparations reported on during the years 1907 to 1911 inclusive, more than four thousand, or approximately 45 per cent., were found to be not in compliance with the Pharmacopeia." I shall quote here a table from this paper, page 1139, showing reported results of analyses made during 1912 of samples of 26 official articles—a compilation of data included in U. S. Hygienic Laboratory Bulletin No. 93, and from this Bulletin No. 93 those interested can find who made these analyses and reports and in what publications they may be found.

Table Showing Reported Results of Analysis of Samples of 26 Official Articles—
Compilation of Data Included in Hygienic Laboratory Bulletin No. 93.

	Number of reporters.	Number of Samples, Examined. Rejected.		Per cent of samples rejected.
Alcohol	7	98	47	47.9
Ammonia, aromatic spirit of	5	116	78	67.2
Ammonia, water	4	19	11	57.8
Asafetida	10	256	200	78.1
Belladonna, tincture of	3	14	6	42.8
Camphor, spirit of	19	802	423	52.7
Camphor, liniment of	8	597	99	16.5
Ferric chloride, tincture of	7	680	219	32.2
Ferrous iodide, syrup of	8	549	88	16.0
Ginger, tincture of	9	74	30	40.5
Iodine, tincture of	18	984	474	48.1
Lard	8	205	55	20.0
Lemon extract	10	252	100	39.6
Lime water	10	635	98	15.4
Linseed oil	12	367	138	37.6
Olive oil	13	912	69	7.5
Opium, camphorated tincture of	5	91	30	32.9
Opium, tincture of	11	252	125	49.6
Peppermint, spirit of	14	270	139	51.4
Solution of hydrogen dioxide	13	1,026	90	8.7
Solution of potassium arsenite	7	570	128	22.4
Sulphur	6	70	35	50.0
Sweet spirit of niter	22	609	336	55.1
Turpentine, oil of	8	639	132	20.6
Vanilla	12	286	116	40.5
Witch hazel	5	91	24	26.3
Total		10,524	3,288	31.2

On page 1142 of this same paper we read, "How little actual reliance can be put in the average drug preparation at the present time can be appreciated when we learn that fully fifty per cent. of such widely used articles as aromatic spirit of ammonia, spirit of camphor, tincture of iodine, tincture of opium, spirit of peppermint and spirit of nitrous ether have been found to be adulterated or below standard."

Nor is this all. Hygienic Laboratory Bulletin No. 93 quotes the Kansas Board of Health Report for 1912, page 115, as saying, "Of 718 prescription scales examined, 195 were condemned, of 11478 prescription weights examined, 5362 were condemned, of 3761 graduates examined, 154 were condemned." In Virginia we know nothing about the condition of druggists' scales and weights, but we do know that all the sheets on all the beds in all our hotels are 96 inches long.

These quotations and figures are all from reliable sources and chiefly from United States Government publications and put out by and with the consent of men who are paid to find out and know the truth of what they print, and with

the imprimatur of the United States Government. It is "a condition and not a theory" that confronts practicing physicians in the United States today, and, if not now a therapeutic nihilist, you soon may be one.

What are you going to do about it? Is there not here a wide and open field for additional legislation by Congress to protect the standards of our Pharmacopeia in interstate commerce, and has not the unrequited labor performed by Virginia doctors in helping on the public health propaganda of our most excellent State Health Board earned for us and, our patients help from this source. It seems other State health boards are at this work, and there is evident need of help from some source to enable the more than forty thousand retail drug stores in the United States to get pure and standard drugs from the manufacturers, and to see that only pure drugs are dispensed to the consumer.

Keeping in mind the reports summarized by Dr. Wilbert and the deductions he makes in his paper as showing how largely commonly used drugs vary from the official standard, and knowing that lit-

tle used drugs are even more unreliable and vary most from standard, is not the doctor justified in trying to protect both his patients and his own reputation by adopting whatever course seems likely to accomplish his end? A knowledge of the facts set forth in this paper is fast becoming public property among doctors and can but cause a certain degree of unrest and suspicion. Some are seeking to protect themselves by using alkaloids and active principles of drugs. Many carry in stock their own drugs, a course made easy in this day of tablets, etc. The physician doing this assumes a double responsibility, but feels justified by the circumstances surrounding him, in that he protects, or believes he protects his patient by seeing that he gets the intended drug and also protects him often financially and saves valuable time.

With fewer drugs and with more exact knowledge of drug action, knowing what to expect from drugs, and with drugs coming up to a required and expected standard, the results obtained should remove the doubts we all have and cure us of therapeutic nihilism by oftener curing our patients.

The Ciliary Muscle and Accommodation.

By T. J. Dimitry, M. D., Professor Ophthalmology
New Orleans Postgraduate School of
Medicine.

This article is written with a desire to convey to the general practitioner, some information that may not be generally understood by him, especially when one realizes that it is only in the last few years that the student receives instruction on the eye. The selection of the heading of this article will not appear clear to many; the choice was so made because the ciliary muscle and accommodation is so little understood. A knowledge of the function of the ciliary muscle and an ordinary smattering of physics, makes it easier to grasp the entire optical system of the eye, and to understand much that is unknown to many.

The eye much like a camera with the purpose in view of having a distinct image of an object formed on the sensitive plate "the retina." With the camera, the focusing is carried on by means of the "focusing lens" in front of the camera, that is movable backward and forward, or by a change in the position of the sensitive plate. This in the camera appears to be very simple, but those who have had experience, realize that a picture in

most cases is only made under certain difficulties. One reason or another being the cause for an imperfect picture, such as, an improper exposure, a lens not perfectly spherical, the quality of the glass, etc. But, the camera can always take a picture, though a poor one; so it is with the eye, that we can very often see with most of the defective conditions of refraction, but it is with difficulty and sometimes indistinctly. This diagram that I have brought here with me this afternoon, gives one a fair idea of the anatomy of the eye, and shows clearly the subject of my remarks. I here show the sclera, it forms the external elastic capsule of the globe and its connective tissue sheaths ramify in it. The choroid, next, lines the posterior section of the eye, and extends from the ora serrata to the aperture for the optic nerve. It concerns us most on account of the great number of blood vessels contained therein as well as to the quantity of pigment. The next layer is the retina, it is a perfect transparent membrane and of a purplish-red color. It is the retina that is provided with the nervous mechanism that so strangely accepts an image formed on it and by the nerve fibres contained transmits this strange impulse created to the brain. One can easily appreciate that the desire is to have a perfect image formed on the sensitive retina.

The cornea is a transparent refractive medium, it forms as it were the window to the eye and is the continuation anteriorly of the epithelia layer of the conjunctiva of the sclera and possibly a part of the choroid. It is convex and has a refractive power of 40.5 Diopters or its equivalent of one inch focus.

Iwanoff first described the ciliary muscle and when an antero-posterior section is viewed even under slight magnification, one can readily see the muscle fibres which we divide into three groups. The outer is the meridional or longitudinal layer which runs parallel with the sclera; these fibres seems to arise from the cornea sclera border at the root of the iris and run backward and become continuous with the choroid at and beyond the ora serrata. The second layer, designated the radial fibres, are situated more interiorly; their origin is the same as the meridional layer, but in passing backwards the fibres spread out very much like that of a fan, towards the center of the eye.

The thickness of this layer varies somewhat in the errors of refraction. The deeper layer is known of as the circular

fibres, it is spoken of as the muscle of Mueller. This circular muscle when viewed in cross section appears as so many points, and in the phylmetropic eye this portion of the muscle is more developed while in the myopic eye, especially of the higher degrees, it is entirely lacking (Iwanoff.) Muell thought that the latter formed a true spincter but this is readily disproved. These three groups of fibres which we designate the ciliary muscle regulate the accomodative changes of the crytalline lens, and I feel assured contributes more to our comfort, health and enjoyment than any other muscle in the body.

The Zonular of Zinn are those little fibres that extend from the ciliary body to the lens, they are the brides of the lens, and when the muscle changes its action; it relaxes or contracts, causing the lens to change its currrature for it is believed that the lens is an elastic body and as soon as these fibres are relaxed the anterior surface will become convex, according to Helmholtz.

The mechanism of accomodation has been a disputed scientific question for many years. Accomodation can be accounted for by an increase in convexity either at (1) the cornea (2) of the lens. Increase of the length of the globe and two other hypothesis that are theocitically impossible; that in an advance of the entire lens or a contraction of the pupil. If the lens did advance and admitting that it touched the cornea, it would not explain and amount of accomodation.

That accomodation is not occasioned by any change in the curvature of the cornea, was demonstrated by Thomas Young when but 27 years of age. His experiment consisted of putting the eye under water and holding close to his eye a weak objective of a microscope which possessed nearly the same refraction as the cornea, both being under water eliminated the refractive power of the cornea and was replaced by that of the objective. In his experiment the amptitude of accomodation remained the same. Accomodation is not effected by an elongation of the globe but, when the crystalline lens is removed there remains no accomodation.

The emmetropic, or one may say, the normal eye provides that during rest, that parallel rays of light should focus on the retina. To have parallel rays one must be at an infinite distance and twenty feet or more is so considered. The normal dioptric apparatus, that is

the cornea the aqueous, the crystalline lens and the vitreous, provide for a focus on the retina; but this focus is only for parallel rays, but, if an object is brought nearer than infinite distance the rays are no longer parallel but divergent and if the dioptric apparatus remains the same the focus would be behind the retina, and one would thereby see very indistinctly, as through a circle of dippression.

The crystalline lens can increase the curvature of its anterior surface therefore adding to its dioptric power and accomodating a focus at all times on the retina, just as we see the use of the delicate thumb screw on the microscope allowing a focus for different objects on the slide.

The function of the lens is to assist (When at rest) the other refractive in focusing parallel rays on the retina and when the object is nearer and the rays are not parallel, it performs that function of accomodation, which condition is said to be occasioned by a change in its curvature.

Thomas Young, 1801, first demonstrated that accomodation was occasioned by an increase in curvature of the crystalline lens. Nearly a century elapsed before his great treatise "Mechanism of the Eye" was understood and before we came to know as much as he. The crystalline lens is a bi-convex body and by its own inherent elasticity (Helmholtz) provides for a change in the curvature of the anterior surfaces. The lens very readily shows its structure after submitting it to hot water for a few moments, the laminae which make up the lens bend over its edge like the layers of a flattened onion. This lens substance is held together by a fibrous capsule and it is to the capsular membrane that these fine transparent fibres that come from all parts of the ciliary body are attached; these fibres are known as the Ligament of Zinn.

Technerning does not agree with Helmholtz in the elasticity of the lens. He speaks of a lens substance and a nucleus, the lens substance having the consistency of gum, and can very readily change its form while the nucleus can not. This he calls the accommodative layer and as age advances the accommodative layer diminishes as the nucleus increases and with it the amplitude of accomodation disappears. It is not my desire here to discuss the different views of accomodation, but may mention that the one mostly accepted in that of Helmholtz. There lurks in my mind the possibility

of the Tschening theory as the correct one.

The difficulty that Young had in demonstrating accommodation depends upon the fact that the ciliary muscle which consists of non-striped muscular fibres, was not discovered till forty-five years after the explanation offered by Young. In 1846 Bowman and Bruecke in the discovery of this muscle gave greater impetus to the study of this subject. All agree that accommodation is due to an effort on the part of the ciliary muscle.

Astigmatic accommodation has been discussed for some years past. It was Dobrowolsky who first expressed the opinion that astigmatic patients could partly correct their defects by producing a deformity of the crystalline lens in a contrary direction by an irregular contraction of the ciliary muscle. George Bull does not admit by Astigmatic accommodation. The Hypermetrope needs accommodation even for distant vision, that is much more the case for seeing nearby. He may be said to be always dragging about with him a deficit in his accommodation, namely the quota of the latter necessary for the correction of his hypermetropia; a deficit which caused him to tire quickly when doing near work (Asthenopia). The over-strained muscle gives way and the eye then ceases to be properly focused. With these continued attempts at accommodation pain in the eyes is created and more especially in the forehead and headaches. This condition is dependent upon an exhaustion of the ciliary muscle and are hence comprised under the name of Asthenopia accommodativa to distinguish them from Asthenopia Muscularis and Asthenopia Nervosa.

A cycloplegic such as Atropine when instilled into the eye will temporarily paralyze the ciliary muscle and thereby put the eye at rest. When under the influence of this drug there can be no accommodation and it is with this most reliable cycloplegic that we obtain the latent refraction. All calculations in the fitting of glasses for those under thirty years can only be corrected after Atropine has been instilled for it is only then that we possess true information as to the refractory condition of the eye. The substitutes for Atropine only add to the opprobrium of lack of exactness of medicine, while ophthalmology can be made, under objective and subjective tests well nigh an exact science. One may compare Atropine and its substitutes to the dif-

ference between exact and appropriate methods.

In conclusion: the ciliary muscle and accommodation provide as the possible cause for many reflex conditions that are now classified as neurotic, and that the ciliary muscle contributes more to our comfort, health and enjoyment than any other muscle in our body.

729 Maison Blanche.

The Business Side of it.

By T. H. Gamblin, M. D., Monticello, Ky.

When a young man adopts the medical profession for his life's work, I am sure he does it after the following reflection:

First is it an honorable and high calling? This is very true, for medicine ranks with the law and the ministry—the three great and honored professions, without underestimating either of the other two, I am fully persuaded that it should rank with the ministry. The law deals with property rights, medicine with the health of the individual, the law with decrees of divorce, medicine ameliorates pain of body and distress of mind, and to a degree makes us willing to "bear the ills we have," law seeks to clear the criminal, or is made the instrument for so doing, medicine determines the rational or irrational state of the mind, and by so doing saves the innocent, and is the means of having the guilty punished; law confines the unfortunate in the mad house, medicine "ministers to a mind diseased" and relieves him, with the minister the doctor goes hand in hand, the doctor relieves the pain that racks the body, the minister the thoughts that distress the soul, the doctor soothes the afflicted, binds up broken limbs and broken hearts, lends a hand to the distressed, and comforts those that mourn; quiets the suckling babe, and is leaned on when youth is gone and age has crippled, consoles the disconsolate mother, administers to the broken hearted father, shares the sorrows of the poor and the afflictions of the sick. Can the minister do more than this?

Is it remunerative, and will it afford me ample means to support myself and family? I venture that if you had thought to the contrary you never would have adopted the calling, you would have been foolish not to have given this consideration to a business that you were to follow for life.

No minister of the blessed gospel but gives this consideration to his calling, for it is right and proper that he should do

so. It is WRIT that a man's first duty is to his family, and surely part of this duty is to support them, and in this age one can not live alone on air. There would be but one alternative left if he did not demand and receive pay for his services, and that would be that he would "Sponge" and live off his neighbors. Well, a long time ago this might have done, but in "these" days it won't work. Any way I always had a contempt for any able-bodied man, be he minister, doctor or what not, that would "sponge" off his neighbors. Yes, the medical profession will prove remunerative enough to support your family if you will demand pay for your services, and see that you get it, if you do not do this you are neither man or christian, therefore start out with the presumption that your services are worth what you ask for them. A physician was once asked why it was that he charged THREE dollars a visit and Dr. Jones only charged TWO, in answer, the doctor said: I know what MY services are worth, and I suppose that Dr. Jones KNOWS what HIS are worth, that's the way to hand it to him, and in making this assessment, remember that a doctor's family should move in good society "and wear good clothes." You should consider that the wife is to be "first lady" at the same time you are playing the "role" of first citizen of the county. I use the term "first" advisedly, the doctor should be first in every thing he undertakes. Down here in Kentucky "the horse that "ran second" receives but little applause, but the one that comes to the string first not only gets all the applause but "bags" the money, very much the same is it in medicine or any other calling, suppose you were making a race for Congress—which I hope you never will, and come in one of being elected of what account is that the other fellow was first. Your family must then be able to dress well, and the "partner" deserves all the extras that you can give her. You will find that the "little woman" will always be willing to "cut low" the expenses when necessary, if it proves not to be a success, it is your own fault, and you should quit it at once and go to swapping horses, or engineering a motor car, or something to your taste and ability. Then again it will afford the young man an opportunity to gratify his ambition. I like to hear a man talk like that, for a man who has no ambition, is of as little use in this world as the fifth wheel to a wagon. You are on the road to success, and if you keep up the determination you are just as sure to

succeed as the sparks are to fly upward or taxes be collected. Succeed at what? In making a living, in relieving the sick, and gaining a high position in your profession, remunerative? Yes, think of the woman who lay sick with a fever, after many long weary and hopeless days recovers and sheds tears of gratitude, the little child who's life "hung in the balance" for many weeks comes back to its mother's arms and fills her cheeks with kisses; the young girl who's life was dispaired of, sees the dawn of health again, and clasps your hand in recognition; the wife who has so often been comforted in sad hours of affliction, sends up her prayers to the throne for you, all this certainly should gratify your ambition. Having now prospered by the pursuit of your profession in a business way, you notice at the end of the year a surplus, what are you to do with it? Don't squander it in riotous living and ways of extravagance.

Beware of the peddler, the shyster, the lightning rod man, schemers, grafters and slick citizens (of this class I hope to have something to say in my next) listen attentively to these callers, not too long, and if persistant, throw them out of the back window, and if you break their necks you will be doing the public a great service, and will throw around your family a mantle of protection. Be content to move along the lines of least resistance, and make money in an honest, legitimate way. It may be slow but it will be sure. An honest penny is more to be desired than a whole lap full of riches acquired in a dishonest way—it may (to the young doctor) be pleasant now to retrospect and see how well you have prospered, the first year netted five hundred dollars only, but you must not forget the cow you got from smith "on account" or the hogs from Jones, for has not "brindle" supplied enough milk for the family? and don't forget that enough butter was made and to "spare," and the hogs they supplied the winter's meat, the garden supplied all vegetables, and you find a few dollars left, only a few out of the year's work, did your neighbor do any beter? The farmer "growls" because the rain fall during the season failed to come within an inch of what it did last year, and says that he has only a half crop of corn, though he really acknowledges that the crop of wheat, hay, oats and tobacco was good. Did you ever know a farmer that did not "growl"? If the weather is clear he is sure that it will never rain, if it rains he is sure that it will never stop; with him there never was the least pros-

pect of a "peach" crop, and he was never convinced until the peaches were so plentiful that they were not worth a cent in the market; the frost is always a "killing frost" with him, but "somehow or other" he has managed to live.

The grocer across the way with two thousand dollars invested, reports a very good year and estimates his "savings" at five hundred dollars or more, and your "stock in trade" is brains not cash.

The blacksmith says that he does not know what his earnings were, but that he is contented and happy, and why should he not be? A little home paid for, a wife that is a helpmeet indeed, and children that "round up" at an even dozen, then too, they have all been well during the year and have plenty to eat. Learn from him and his many lessons, contentment, happiness, and no infringement on nature's laws, twelve bright faced children bespeak the fact, look at the mand-broad shouldered, tall, with muscle as hard as iron, and nerve unshaken, with an eye as an X-ray we see a heart pumping pure untainted blood full of red corpuscles; go to, you pale, puny, and ill-shaped being, you shut out the fresh pure air and bright sunlight that God has given you and substitute for it in your palaces the foul air of furnaces, and the gleam of artificial light, no wonder that your health gave way, your nerves unstrung, and your stomach refuses to receive the pure food of the fields and forests, be content good blacksmith, though your trade is black your heart is white, and you not only represent the "bone and sinew" of the land but the brain and brawn as well, from your ranks come Presidents and other men who are called great, and your calling is no disgrace, go on playing your "anvil chorus" and serving God, and you will at the last day join "the great chorus" of good men made perfect, who sing Hosanna to the King.

Local Anesthesia.*

By F. D. Austin, M. D., Charlotte, N. C.

The desire to alleviate pain is as old as man; its fulfillment has had to wait long. (Braun). Previous to the introduction of cocaine but little had been accomplished in attempting to produce local anesthesia for surgical operations. The Egyptians were said to have possessed certain applications for this purpose, but investigation has shown them to have been more superstition than actual fact. (Mitchell).

*Read at Seventh District Medical Society, December 7th, Concord, N. C.

Compression of nerve trunks was probably the earliest method to be of any real service. Originating in antiquity, it was practiced by the Arabs, revived by Pare in the 17th century, and throughout succeeding ages one sees it cropping out anew in some special tourniquet or pressure pad only to be again abandoned. It survives now in the form of the Esmarch elastic bandage, which, it is true, will produce anesthesia of the distal part of a limb. The uncertainty of the anesthesia and the length of time necessary to produce it, the actual pain of the pressure itself, and the danger of gangren and motor paralysis render it unsafe and not practical.

Cold was the next method of anesthesia used. Thomas Bartholinus first called attention to the use of cold to reduce sensibility in the 16th century. In 1807 Larrey, Napoleon's surgeon, reported that amputations done on the battlefield at very low temperatures—(19c) the sensibility of the parts was entirely gone. In 1886 Benj. Ward Richardson put cold on a practical basis by the invention of the Ethyl Chloride Spray. The freezing process acts as a terminal anesthetic, and is complete in a few seconds. Prolonged or extensive freezing is apt to cause severe sloughing, and therefore its field of usefulness is very narrow, and in nearly all cases the injection of the local anesthetic is much to be preferred. Both pressure and cold, however, act as aids in producing and prolonging the anesthesia produced by drugs.

Electricity is used as a local anesthetic, and as a means of driving drugs into the tissues to produce local anesthesia. The effect is probably more that of suggestion than of actual anesthesia.

Besides the physical means of producing local anesthesia medical literature speaks of hundreds of drugs claimed to produce local loss of sensation. Local anesthesia through the physiological action of drugs was made possible in 1853 by Alex. Wood, who invented the Hypo Syringe. For many years drug after drug was used but none was found to be quite satisfactory till cocaine was introduced in 1884 by Koller.

Cocaine for years was used almost universally as the local anesthetic, and is used today by a number of surgeons. It is used in 1-10 per cent. to sat solutions, and even the pure crystals with and without adrenalin, depending on the location it is to be used. The local effect of cocaine is ideal, but the systematic effect is too often disastrous to the

patient. Statistics show that there has been a large number of deaths attributed to its use. Especially is it dangerous in large mucous cavities, such as the bladder, mouth and rectum. I recall a few deaths from its use in Urological and Rectal work. I also recall most vividly my personal experience with the use of the drug on my own body. It came near killing me in 1907 following its injection into the skin to remove scar tissue. This experience was sufficient for me and I have used the drug only a few times in seven and a half years practice. The fact that we all have had more or less exciting experience, or have been told by others of their bad experience with the use of this treacherous drug it would seem to any man's mind that it would be his duty to try some less toxic drug. We have quite a number of drugs that can be substituted for cocaine, that will give just as good local results, in fact some will give better. Among the chief substitutes for cocaine now used are Eucain, Quinine and Urea Hyd., and Novocain.

Eucain is four times less toxic than cocain. Its anesthesia is almost perfect, but it does not last more than a few minutes, and that makes it objectionable in a great many operations.

Quinine and Urea Hyd. is an admirable local anesthetic, especially for urological and rectal work because of the fact that the anesthesia lasts from a few hours to several days. This is very desirable in hemorrhoidal work but the serious drawback to it, is that it sometimes causes sloughing. I have used it in several operations and have had two serious sloughs and a few small ones. It is not toxic even in 60 grain doses.

Novocain and suparenin Syn., is the local anesthesia I wish to call your special attention to. It is eight to ten times less toxic than cocain and is just as efficient. It is used in $\frac{1}{4}$ to 20 per cent. solutions, $\frac{1}{4}$ to 1 per cent. solutions for ordinary infiltration anesthesia and 2 to 20 per cent. solution for surface application, such as nose and throat operation. A .5 per cent solution in the bladder and urethra will render pain imperceptible. There is no need of fearing trouble with novocain anesthesia. I have never noticed the slightest toxic effects from the drug. Braun states that 250 c. c. of a .5 per cent. solution can be injected without fear of poisoning. A review of the work of 112 surgeons shows no mortality. Another advantage of novocain over cocain is the fact that you can boil it without altering it in any way, whereas cocain you cannot.

I use it exclusively as the local anesthetic in my office and hospital work.

One sees every day skepticism and distrust in regard the newer local anesthetics but this can in some measure be attributed to ignorance of the technic and its possibilities. You have seen men attempting operation under local anesthesia, who showed from the first needle prick their absolute unfamiliarity with the principals involved, and have heard them later express their opinions as to the unreliability of the method. Hurry is in a large part responsible. In spite of training and skill these operations require time. If the novocain anesthesia is used, and the operation is done with skilled hands, you rarely hear a patient condemn the operation, and the greater per cent. of them would take the same operation under the same anesthesia again.

There are those patients whose greatly lowered vitality absolutely forbids general anesthesia and in who it would be foolish to gamble with cocain, who may be carried safely through a serious operation under the novocain and suparenin. Syn. anesthesia. Many patients who would rather suffer the pain of anal fissures and hemorrhoids, benign tumors, etc. than to submit to general anesthesia, will gladly submit to the operation if done under a safe local anesthetic.

I believe local anesthesia to be imperative in hemorrhoidal work. You all know that when a patient "goes wrong" on the table that one of the best ways to make him breath again is to dilate the anal sphincters. Those of you who have done hemorrhoidal operations know that it requires profound anesthesia to dilate the sphincter and sufficient to deliver the hemorrhoids. Now suppose your patient is under profound anesthesia, the sphincters dilated and he stops breathing, one of your best pillars to fall back upon is gone. I operated on a patient a short time ago for hemorrhoids under general anesthesia because he refused to have it done under local, and when I had dilated his sphincters and begin to remove the tumors he suddenly stopped breathing. I thought I would dilate the sphincters more and when I attempted it, I found them already completely relaxed. We had to resort to the other methods and after some minutes the patient began to breath again. I could not have had such experience under local anesthesia. I use a .5 per cent. solution for hemorrhoidal and fistula operations. The only pain the patient feels is the pricking of the first needle

that is inserted into the hemorrhoids. I give $\frac{1}{4}$ grain morphia and 1-150 grain atropine or 1-8 grain morphia and 1-200 grain scopolami, just before the operation to take care of the after pain. Crile says that under the influence of morphine and scopolamin no one is a coward, no one is brave, every one is in a neutral state.

You can dilate the rectal sphincters under novocain anesthesia by injecting a .5 per cent. solution at 4 cardinal points about 2 cm from the anus with the finger in the anal canal as a guide, thrust the needle through the skin that has previously been touched with a small pledget of cotton sat with iodine, and into the body of the sphincters, inject the solution as the needle passes through. In a few moments you can get good dilation; the whole anal canal and lower rectum is anesthetized. You can do just as extensive hemorrhoidal operations under novocain and Sup. Syn. anesthesia as you can under general and with much less danger and shock.

Recently, I did a suprapubic cystotomy and removed a large vesical calculus from a man 68 years old, whose blood pressure was 205, had chronic nephritis, under novocain and suparenin anesthesia and morphine scopolamin anesthesia. Now all of you will agree that a general anesthetic was contraindicated in this case.

A large number of other operations, such as amputations, appendicitis, repair of pernieum, varicocele, hydrocele, and hernias especially are being done under this anesthesia, and the results are uniformly good.

Spinal analgesia is being done with novocain every day and so far as I am able to find the mortality from the drug is nil.

So then, if we have an efficient, practically non-toxic substitute for cocain, why not use it instead of using a drug, so treacherous, so apt to cause death when we least expect it.

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The Value of the X-Ray in Diagnosis.

By J. W. Squires, M. D., Charlotte, N. C.,
Roentgenologist to the Charlotte
Sanatorium.

Roentgenology is a comparatively new speciality and one which the medical profession has been slow to utilize to the fullest extent. The latter is due to the fact that until the past few years the dangers of the X-ray were not thoroughly understood, the radiographs were not

always clear and the interpretation quite frequently was still worse. With improvements of these features new impetus has been given to this work and the wide range of usefulness of the X-ray is now being utilized to great advantage.

The X-ray has two distinct uses first for diagnosis, second for treatment. We are all aware of its beneficial action in the treatment of certain skin affections and superficial malignant processes. Recently this field has been extended and favorable reports in deep therapy are being made. This is especially true in the treatment of uterine myomata and deep seated cancer where operation is not advisable. This phase of roentgenology will not be discussed here as the writer desires to limit himself to the discussion of diagnosis.

The diagnosis of diseased conditions by means of the X-ray is gradually extending into parts which formerly were regarded as impossible to demonstrate. First our studies were limited to that of bones and foreign substances in different parts of the body. This was gradually extended until now the diagnosis of numerous pathological conditions can be readily made. This is particularly true in the diagnosis of gastro-intestinal lesions. As we know the organs of this part of the body can now be studied radiographically by giving a test meal composed of some substances which is opaque to the X-ray. Bismuth subcarbonate or barium sulphate given in cereal or suspended in buttermilk are usually employed for this purpose and give very satisfactory results.

As this is one of the more recent and important fields of radiographic diagnosis, the writer will give a summary of the usual method of examination employed. A meal of 70 grams of bismuth subcarbonate in 400 c. c. of buttermilk is given. A radiograph is taken immediately after the meal. This one gives us an idea of the size, shape and position of the stomach. It is important because the stomach is well distended and irregularities in outline can be readily detected. The succeeding radiographs are taken at intervals of one, three, six, twelve and twenty-four hours. The one, three and six hour radiographs gives us an idea of the peristalsis of the stomach and its motility. The six hour radiograph also shows the ileo-caecal region as the bismuth normally at this time is emptying into the caecum. The presence or absence of adhesions or a patulous appendix is determined from this radiograph. The

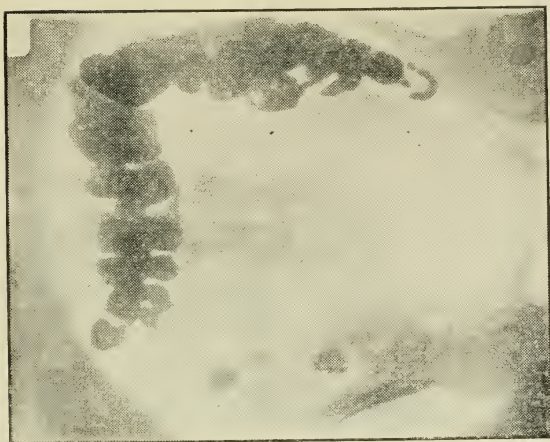


Fig. 8.—Patulous appendix, drainage good. Gastric symptoms were predominant in this case. There was, however, a history of recurring attacks of abdominal pain during the past three years. Operation: Appendectomy. This completely relieved the symptoms.



Fig. 2.—Patulous appendix, drainage good. No history of appendicitis; gastric symptoms predominant. The stomach, radiographically, showed evidence of a duodenal ulcer but a diagnosis of a reflex condition of the stomach probably from a chronic appendix was made. This, we think, is correct but not confirmed as the operation has been postponed.



Fig. 3.—Patulous appendix, drainage poor. History of chronic indigestion. No conclusive evidence of appendiceal inflammation, gastric disturbance predominant. No operation but the radiographic findings show beyond doubt a chronic appendix with considerable reflex gastric symptoms.

twelve hour radiograph is important in that it shows the motility of the colon. In twenty-four to thirty-six hours the meal should be in the rectum or expelled.

By this procedure many gastro-intestinal conditions can be diagnosed. Gastric and duodenal ulcer, and tumors of the stomach and intestine in a large percentage can be detected. Also chronic appendicitis, position of the stomach and intestine and various deformities of these may be demonstrated.

In differential diagnosis the X-ray is also very valuable. This is particularly true in differentiating between appendicitis and a stone in the right kidney or ureter. The writer has seen two cases recently in which the radiograph revealed



Fig. 4.—Patulous appendix, poor drainage. Symptoms were suggestive of chronic appendicitis. The gastric symptoms were so marked that this patient first consulted a stomach specialist. The X-ray examination showed a diseased appendix and the patient was advised to consult a surgeon.

Operation: Appendectomy. This completely relieved the symptoms.

a large stone in the kidney that were previously diagnosed appendicitis and one of these the appendix was removed without relief. Another case in which the symptoms were supposed to be due to a ptosed kidney the writer demonstrated thirty-nine stones in the gall bladder.

The demonstration of the the open appendix particularly where the drainage

of the appendix is poor has taught us the importance of excluding a chronic appendix before instituting treatment for a supposed gastric lesion which in a number of cases are found to be reflex from a diseased appendix. In the cases illustrated below the X-ray demonstrated an open appendix and other evidence which convinced us that the appendix was the primary trouble rather than the stomach

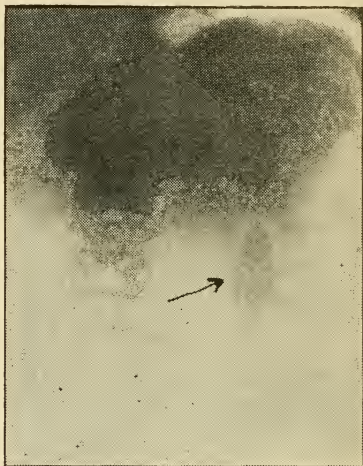


Fig. 5.—Gall bladder filled with gall-stones. The symptoms in this case were mild and not very suggestive of stones. The radiographic demonstration of gall-stones is difficult but by special technique the percentage detected is being considerably increased.

although the gastric symptoms predominated. It is thus observed that the X-ray is very valuable in differentiating between chronic ileocaecal and gastric lesions.

The diagnosis of lesions around the roots of teeth, various deformities of these, congenital absence, odontoma, etc., also constitute a very valuable field for the use of the X-ray. Abscesses of teeth are one of the most fruitful sources of arthritis therefore the localization and extent of these is necessary before proper treatment can be instituted. In a number of cases the X-ray has pointed out to us extensive lesions around the roots of teeth which on being treated cleared up arthritic symptoms.

The diagnosis of tumor of the brain, mastoiditis, frontal-sinus disease, chest



Fig. 6.—Fracture lower third of fibula with considerable displacement. Also small fragment broken off lower end of tibia.

conditions, malignant and tubercular involvement of the bones also include another useful field for the X-ray. Illustrations of some of these conditions as shown by the X-ray will be given.

The object of this paper is to give in a superficial manner a resume of the possibilities of the X-ray in the diagnosis of many pathological conditions and to emphasize its importance in differential diagnosis.

"Dont's" in the Treatment of Insomnia.

Miller emphasizes three points in the treatment of insomnia: (1) Never let the insomniac drug himself. (2) Never let him know what he is getting or how much. This is necessary, so that the physician or nurse can adjust the dose without the knowledge of the patient. (3) Never under any circumstances allow the patient to go to sleep with the hypnotic by his bedside, with the idea that he will not take it unless he needs to. It means that the patient's mind is started on a train of speculation as to whether he will or will not need the drug, even after the light is out and conditions are favorable for sleep. The patient will probably say: "I will not take it now, I will wait another half hour." The upshot of this is that the wretched patient gets five

hours' sleep instead of eight, because during three hours the draught was in the bottle instead of in his stomach.—Medical Press and Circular.

Combined Syphilitic and Tuberculosis Infiltration of the Larynx.

McKenzie reports the case of a woman, aged 48 years, who came under his care six years ago for tertiary ulceration of the nasal septum, with some redness and thickening of the vocal cords. This was cured by antiluetic remedies. In September, 1913, she returned with a general infiltration of the larynx without edema, ulceration or any other sign suggestive of tuberculosis; but as the patient complained of cough and expectoration the sputum was examined and tubercle bacilli were found. On October 19 an injection of neosalvarsan was made with immediate relief of the symptoms. The voice became clearer and the cough easier. An interesting reaction was observed in the larynx the day after the administration of the neosalvarsan, the mucous membrane assuming a livelier red and appearing to be moister and more succulent. This promise of benefit was not, however, realized. The infiltration increased, and as it was affecting the subglottic region and giving rise to serious dyspnea, the patient was again admitted to the hospital. On November 14 salvarsan was injected, and the same evening an urgent tracheotomy under local anesthesia had to be performed. There was no evidence that the laryngeal obstruction had been increased by the salvarsan. The patient experienced some difficulty with the metal tracheotomy tube, which proved irritating and productive of coughing, and a rubber tube was inserted with immediate relief. The coughing had, however, led to a widespread emphysema of the tissues of the neck and the thoracic walls. Since the tracheotomy the larynx has gradually come to assume the typical aspect of tuberculosis with edematous infiltration of the arytenoids. the galvanocautery puncture has been used once with some benefit.—Proceedings of the Royal Society of Medicine.

Cyanide of Gold and Arsenic in the Treatment of Lupus.

Jaun de Azua reports good results following this method of treatment introduced by Bruck. The drug which should be kept in green bottles or ampoules, is used in a 1 per cent. solution, in distilled water and should be injected intravenously in doses of six centigrams. This

method has also been employed in the treatment of syphilis, apparently with good results.—*Revista Clínica de Madrid.*

The Nervous System and Cutaneous Pigmentation.

More than ten years ago it was discovered that one of the important sources of the coloring matter of the skin is an end-product of protein disintegration in the intestine, namely tyrosine. In fact, it was shown that all the colors of the butterfly's wing are similarly derived from decomposition products in the bowel. This wizardry of biological chemistry has its counterpart in the production of aniline dyes from coal tar. The pigment cells of the skin are subject to many influences, not only chemical, but also thermic, actinic and mechanical; and are developed to a higher degree of complexity in the lower orders of life, such as the fishes and amphibia. The fact that the later can in many instances adapt their cutaneous coloration to that of the environment indicates a close relationship between the nervous system and the pigmentary apparatus of the integument. That such a relationship, though less pronounced, exists in human beings is indicated in the instances of changes in skin coloring arising in the course of nervous diseases, and in the conspicuous examples of graying of the hair resulting from fright or intense mental strain.

This subject forms the basis of an interesting study by Fritz Nehl (*Zeitschrift für klinische Medizin*, Vol. 81, Nos. 1 and 2.) He points out that the instances of so-called sudden graying of the hair as the result of anxiety must be regarded critically. In these cases, according to Landais, there seems to occur, not a disappearance of pigment, but an accumulation of innumerable minute bubbles of air in the hair. The premature graying of the hair associated with prolonged grief and worry is perhaps to be explained on the basis of a disturbance in the general physical condition of the individual. In this instance there are associated with the graying of the hair a general emaciation, a reduction in the hemoglobin-content in the blood, and a loss of tonus in the skin and in the body musculature. There are however instances of the direct effect of changes in the nervous system upon the cutaneous pigmentation. Thus, canities is frequently observed in the territory supplied by a particular nerve. The neural causation is especially manifest if local neuralgic pains are present, as in idiopathic vitiligo, and in the case of the

pigmentary atrophic spots of leprosy in which there is a reduction in sensibility in the affected cutaneous areas.

The pigmentary anomalies of segmental pigmented nevi and of congenital segmental albinism are attributed to disturbances in the development of the cutaneous cells rather than to any neurological factor. The question whether the pigmentation of Addison's disease has anything to do with the nervous system has not yet been solved. Undoubtedly, however, the suprarenals with their innervation by the vegetative nervous system have some influence upon the cutaneous pigmentation. That the potent factor is the vegetative nervous system is also indicated in the instances of pigmentation occurring in exophthalmic goiterdiseases of the ovaries, and pellagra, in all of which the autonomic nervous system is involved.

The pigmentation observed in scleroderma and facial hemiatrophy, and frequently confined to the areas of distribution of particular nerves, suggests that the sympathetic fibers in the peripheral nerves are the ones responsible for the pigmentary changes. At any rate, in these conditions there are neither motor nor sensory disturbances. Moreover, it has been shown that sections of sympathetic nerve fibers may give rise to a disappearance of pigment from the skin, as in the cases of unilateral graying of the hair following lesions of the cervical sympathetic, and of heterochromia of the iris occurring after resection of the upper cervical ganglion. It is quite probable, therefore, that prolonged grief and worry may through the agency of the autonomic nervous system give rise to premature graying of the hair.—*New York Medical Record.*

Chronic Catarrhal Bronchitis.

This Condition, so frequently encountered and especially so in the changeable climate of the middle and western states, is a clear indication for the continued administration of cod liver oil.

These patients, if unable to seek a more suitable climate, should be instructed carefully as to dress and bodily functions. Thus, every effort should be made to guard against exacerbations. With close attention to dress and the systematic use of cod liver oil, such as *Cord*, Ext. 01. *Morrhuae Comp.* (Hagee) which is the preferable cod liver oil preparation by reason of its palatability and therapeutic effectiveness, the patient is employing the best means for use in this form of bronchitis.

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EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.

STANDARDIZATION OF PUBLIC HEALTH OFFICERS AND THEIR WORK.

That public health work should be standardized to secure not only the most efficient service, but in order to have a measure of comparison with a view to ascertaining the actual value of the service performed for the state, municipality, or county, as the case may be, is an opinion, that while comparatively new, is gaining ground with rapidity. When one considers for a moment that almost every thing of any value whatever has a standard of requirement or of measurement, call it either, it means the same, it is surprising this matter has not been considered and provided for ere this, and may only be accounted for on the hypothesis that public health work required so much labor to get its authorization by the governmental powers that be, that when once arranged for, it was, and is generally permitted to progress along in its own fashion, or according to the personal ideas of the local officials engaged in the work. The suggestion of standardization was made at the last annual session of the State Health Officers Association of North Carolina, in Raleigh in June, 1914, met with views of varying divergence of opinion among the assembled health workers as was naturally expected.

North Carolina, taking the lead of states in the work, now has some thirteen or fourteen local whole time county health officers, each working after his own special methods, fashioning his measures to meet the conditions present as seen through his own eyes. Good work is being performed, and unquestionably some admirable results are accruing from the efforts being put forth; but the lack of standardization, the lack of a definite clearing house with detailed reports from week to week and month to month, showing just what is being done, and how, and why, is a bar sinister on the work, and means if nothing less, the loss of an immense amount of valuable experience at present only available by the individual health officers who has had the practice as local health officers in his county or municipality. In other words, the health officer is working under a lack

of system shaped and designed to collect, tabulate, and preserve for the educating of others, the varying experiences he may have. Again it is to be remembered that so complex and multifarious has become of late years the possible duties of a local medical health officer in a county or municipality, that it is practically an impossibility to take from the ranks of even skilled practitioners of medicine or surgery, physicians who are at once fitted to engage in practical public health work without some special preparation or study looking particularly toward the practical application of the principles of the medical sciences and art, to the bettering of community health. In other words the average good doctor has spent his days and his nights wrestling with pathological problems in the main, as affecting individual members of the social body, and his efforts are more peculiarly directed toward curing disease rather than studying the whole people with the object in view of ascertaining how best to proceed to keep them well. With this purpose in mind several of the medical teaching institutions have designed special courses leading to the degree of Doctor of Sanitation or Doctor of Public Health, and it is assumed the possessors of such degrees are better fitted to perform the responsible duties appertaining to practical public health work than the average medical practitioner. About the absolute correctness of this conclusion there will yet remain some degrees of doubt in the judgment of physicians who have had large experience as general practitioner of medicine, for it is well known that one of the greatest dangers that confront future public health work is the avidity with which many of its devotees jump wildly at a tentative theory merely put forth to incite farther study or scientific investigation of a given subject and enlarging upon the given hypothesis, being at once to teach the public the same assumption as an established fact. Herein lies one of the greatest imperilments jeopardizing the success of future public health work. The public sanitarian, if he only realizes the limitations of the domain of certainties in his work, while prosecuting his labors with courageous conviction, he will not lapse into an overindulgence in superheated promises of results that men who have had years of general practice realize are impossible of realization. And right at this point, it may be suggested that in all likelihood men who have had experience as practi-

tioners of general medicine, are other things being equal as to education, professional and general, more likely to develop into capable and efficient practical public health officers. Discretion, tact, capacity to feel the community pulse and determine its notations, the ability to weigh and measure local sentiment and engage it for useful helpful purpose—these and other acquirements are not hardly to be learned in schools other than those of practical life, and the contact and relations of some years existing between the practising physician and the people he works among and upon, afford him educational opportunities denied the recent graduate from even the best schools of our science and art. With a due consideration of all the available data at hand, and the recognition of the fact that if the work of local county health officers now in the field, shows the anticipated results, there will each year be a demand for others to engage in the practice of county and municipal public health work, the North Carolina State Board of Health, has through its able Secretary, Dr. W. S. Rankin, arranged the following tentative plan for the giving of a course of practical training which will require about six or seven months to complete. This course, when taken by a physician who has had previous training in the practice of medicine should fit him, if otherwise capable, to engage as a whole-time health officer in any community, with a well defined knowledge of what he is to do, how to go about it, what results to expect—all being based on a careful study of the state system with which he is to cooperate, and an acquired first hand understanding of public health work. The course is as follows:—

State health administration or state health laws and policies, four weeks. During this course the apprentice is assistant to the executive officer of the board, answers as much of the official literature as he can, and is referred to and quizzed upon the proper literature.

Vital statistics, four weeks. During this time the apprentice is given actual experience in every phase of the work of the bureau of vital statistics, is referred to proper references on vital statistics and is required to study and criticise the vital statistics table appearing in various reports.

Popular sanitary education, three weeks. During this course the apprentice is required to prepare articles for the bulletin and press service, to study exhibits, slides and lanterns, and to act as

assistant to the bureau chief.

Tuberculosis, four weeks. During this time the apprentice assists the state sanitarium and in bureau for tuberculosis is assigned the proper reading and is given quizzes upon it.

Laboratory, four weeks. During this time the apprentice will do the routine examinations of the state laboratory and be quizzed on the interpretation of water analysis and upon epidemiological procedure.

County health work, six weeks. During this time the apprentice will serve as assistant to an efficient county health officer and will be sent to 'see special phases of county health work in different counties.

On the completion of this six or seven months practical course, a certificate of proficiency in public health work signed by the president and executive staff of the board will be given the apprentice.

J. H. W.

PASTEUR'S DREAM.

Pasteur's idea of the possibility of effecting the destruction of the entire species of any disease-producing microbe seems to become more difficult of execution the more we learn of the biology of micro-organisms. Formerly it appeared that if we could corral all suffers from a given infectious malady, and maintain effective quarantine, that their recovery or death would sweep it from the face of the earth. But we have since learned that many microbes, such as the typhoid bacillus, the pneumococcus, and even the cholera spirillum, lurk in the bodies of "carriers" for indefinite periods; that the tubercle bacillus, the bacillus of bubonic plague, the diphtheria organism, and many others frequently infect other animals than ourselves. Even organisms often parasitic on man, such as the tetanus and malignant oedema bacilli, naturally derive sustenance from vegetable matter, so that were man to attempt the destruction in question by such methods of eliminating all possible sources of seed, the eventual result would probably leave a single human standing stark in the midst of a world wide Sahara, and even his continuation might depend upon the traditional inability to "see ourselves as others see us," and Burns did not have a microscope!

DO FLIES TRAVEL.

What is the probable flight of the common house fly? We read in *The A. M. A. Journal*, of December 5th, 1914, of experiments made at Cambridge, England,

where 25,000 flies were trapped, then stained, colored or marked then liberated, then recaptured at various stations about the city. The maximum distance traveled in the city was found to be quarter of a mile—1320 feet.

Where they had open spaces of heath to cross they have been found 2310 feet from place of liberation.

In a recent experiment conducted by S. A. Forbes, in Cook County, Ill., after trapping flies and staining them with a chemical solution for purpose of identification; they too were recovered, ranging up to a quarter of a mile—1320 feet from place of liberation.

These experiments, in my estimation, are no more to be relied upon, in estimating the natural flight of the fly, than could the speed of the dog after being trapped and a tin can tied to his tail; or of the flight of a setting hen, after being caught, and a red flannel string tied to her tail (excuse me Mrs. Hen, I mean no undue reflection on you, you are a noble bird, and one of man's very best friends; you produce more wealth than all the silver mines in the world.)

A common cur dog, with a tin can tied to his tail, though he be the laziest dog in the country, under such circumstances, suddenly takes on a new lease of life, he seems to forget that he is a cur, or any other kind of dog; breeding does not enter into the circumstances: he loses his identity: I know, I have tried it: have'n't you? and enters the ring for the free for all race, and he runs neck and neck with the fleetest gray-hound, he furnishing the music for the pack that are bringing up the rear.

The mother hen forgets her nesting place, her brood, her partner, she loses her own identity, and no longer recognizes the home of her chick and pullet days, as she makes speed with all the life there is in her, first on foot, then on wing, then alternately, in a vain effort to get away from that infernal red flannel string.

The fly that is trapped, then stained or colored with a chemical solution, then liberated and trapped again, would be just as liable to lose its identity, as the dog or the hen, about which there can be no question.

In order to understand the nature of an individual we must study that individual in its natural state as near as possible.

However these men have made tracks in the right direction, and all honor is due them for the effort they have made, but (honor bright) isn't it evident that

some other tactics must be employed to solve the question satisfactorily.

I venture the assertion, based on years of observation, that the fly doesn't travel any more than a rabbit. The fly is hatched from an egg like a bird, in the nest, lives a natural life, and dies a natural death, all in a radius of a very few hundred feet, unless it is carried from its usual feeding grounds.

They are great riders and may be carried indefinitely.

NEWSPAPER ADVERTISING.

It is surprising and disgusting to ethical and modest medical men to read the items in the local newspapers furnished by notoriety seeking physicians, who furnish such items, in order to get that kind of business boostings. The most trifling incidents in their practice are exaggerated and magnified. They are often prevaricators, and they have the low idea that it is legitimate advertising. Then the beauty of it is that it costs nothing.

THE HUMAN MACHINE.

The ancient world had seven wonders, viz:

1. The Pyramids of Egypt; 2, the Pharos of Alexandria; 3, the walls and Hanging Gardens of Babylon; 4, the Temple of Diana or Artemis at Ephesus; 5, the Statue of Olympian Zeus (Jupiter) by Phidias; 6, the Mausoleum of Artemisia and 7, the Colossus of Rhodes, but the modern world has only one—the Human Body. When we look around and contemplate the many wonderful things accomplished by our modern civilization we are lost in admiration and awe; the genius and skill of our great artist, engineers and artificers in designing and executing their epoch making works justly call forth our unstinted praise and arouse our patriotic pride but when we have exhausted all our superlatives and come back to that poor, despised human body which for more than a thousand years had been neglected, scourged, lacerated and degraded we are in the presence of a mechanism which far transcends them all and beside which the most complicated man made machine or work is simplicity itself. And why do I say this? Because:—

1. In itself it is a microcosm or miniature of the universe and contains the elements of ocean, earth and air.

2. Regarded from a purely mechanical viewpoint it is a superbly efficient instrument, infinitely complex, exquisitely delicate, and yet powerful, enduring and

adaptable beyond belief.

3. It is the most efficient energy or force producer in the world and no engine or motor can compare with it in this respect.

4. It is the greatest worker known; in a single day the body of a healthy man does work equal to lifting a weight of thirty-six hundred tons one foot from the ground—a man at hard labor will do a work of two hundred to two hundred and fifty foot tons a day. Thus it will be seen that to carry on its general activities the body does the work of fourteen or fifteen men. This is many times what any man made engine can do with the same amount of fuel.

5. The human body is not only a great force producer but has a most efficient system for burning up and removing its waste materials if it is properly cared for and not overloaded with too large a quantity and improper kinds of food or poisons.

6. If ministered to with temperance, managed with moderation, lubricated by a kindly genial disposition, its way illumined by the sunshine of hope and protected against diseases and accidents, there is no reason why a human body starting with the right kind of an endowment or heredity, should not last for a hundred years.

THE FORTY-SECOND ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The forty-second regular annual meeting of the American Public Health Association was held in Jacksonville, Fla., beginning November 30 and ending December 4, 1914, under the presidency of Dr. Wm. C. Woodward, Washington, D. C.

The attendance was numerically large and representative of the best in the various fields of human endeavor, including leading physicians, sanitary engineers, hygienic experts, public health officials and representatives of national, State, provincial, county, and municipal boards of health, sociologic workers, men and women of international fame as acutely interested in every phase of betterment of human conditions. It was a fine gathering of scientists and intelligent cultured people; the papers presented were of high order, and the discussions enlivening, vigorous, and helpful to a degree. While naturally the leading spirits of this great international association are specially trained medical men, yet the large number of others included in the mem-

bership, and more or less actively participating in the work of the annual conventions, give an added interest to the proceedings and render the sessions very attractive. Again the sprinkling of foreign Americans present and participating presented a feature calculated to impress. A number of leading Canadian public health officials were present, several from Cuba, and a few only from Mexico—the present civil war in the latter country doubtless reducing the attendance from that country. Surgeon General Rupert H. Blue, Dr. H. W. Wiley, Dr. Woods Hutchinson, and Dr. W. A. Evans, each widely known to the public generally as popular writers and speakers on modern medico-social and hygienic questions, were present and active participants not only in the meetings of the Association, but each delivered popular medical addresses to the laity in the theaters and elsewhere during the week to large and attentive audiences. The work of the several sections was done with a celerity and briskness quite different from what is usually seen in State or other local medical societies—in this respect setting an example worthy of emulation as it is manifest to any one frequently attending medical meetings that much valuable time is lost in superfluities, such as unnecessarily long papers, the passing of useless compliments and irrelevant discussion.

The exhibits were varied and extensive in character covering the wide field of hygiene and sanitation, and were gathered together in the handsome temple of the "Shriners" of Florida. The large auditorium was well filled with the elaborate general exhibits of State and municipal boards of health, and others showing special features of illustrative of new designs in sanitary equipment, were mingled here and there. At every hour of the day or evening the aisles and corridors of the large hall were thronged with visitors, all vying with each other in their curious interest to learn all possible about the human body, its diseases and how to prevent or escape them.

It was easy to see that of the various State board of health exhibits, none received quite so much attention from both physicians and laymen as did the splendidly prepared and carefully arranged display of the North Carolina State Board in charge of the indefatigable Mr. Warren H. Booker, C. E. While other States made excellent showings of what was doing along lines of sanitary educational effort, it was manifest from the be-

ginning that the Old North State was the centre of attraction in the exhibit hall, and when the final award of the judges conferred the first prizes to North Carolina, only the expected happened, and the verdict was universally approved. The Asheville, N. C., municipal display was very fine and attracted much favorable notice.

The traveling health exhibits in the two cars of the Louisiana State Board of Health in another parts of the city were visited by large throngs of interested people and were in every way eminently worthy of such attention. These traveling health cars of the wide-a-woke Dr. Oscar Dowling of the Louisiana State Board are accomplishing a great deal for sanitary education and uplift in their extensive journeys about the country, and any community may esteem itself fortunate in receiving a call from these sanitary educators.

The social features of the session included the customary ball, a sail down the river with refreshments aboard, and various minor affairs—all pleasingly appropriate and yet not taking much of the business hours of the meeting.

The following were elected officers for the year 1915:

President—Prof. Wm. T. Sedgwick, Boston, Mass.

Vice-Presidents—Drs. C. J. Hastings, Toronto, Canada; Juan Guiteras, Havana, Cuba, and C. E. Terry, Jacksonville, Fla.

Secretary—Dr. S. M. Gunn, Boston, Mass.

Treasurer—Dr. Lee K. Frankel, New York City, N. Y.

Executive Committee—Drs. J. F. Anderson, Washington, D. C.; J. H. Landis, Cincinnati, O.; and Alfredo Dominguez, Havana, Cuba.

Rochester, N. Y., was elected the place of holding the next session.

J. H. W.

Editorial News Items.

The regular meeting of the Gaston County Medical Society was held in Gastonia, N. C., December 2, 1914, and the following were elected officers for 1915:

President—Dr. D. A. Garrison, Gastonia, N. C.

First Vice-President—Dr. Chas. H. Pugh, Gastonia, N. C.

Second Vice-President—Dr. T. M. McCoy, Mt. Holly, N. C.

Secretary-Treasurer—Dr. Bessie Puett, Dallas, N. C.

Censor—Dr. J. W. Reid, Lowell, N. C.

Dr. Reid read an instructive paper on "Anaesthetics."

The regular meeting of the Haywood County Medical Society was held at Canton, N. C., December 9, 1914, and the following officers elected for 1915:

President—Dr. J. H. Mease, Canton, N. C.

Vice-President—Dr. J. F. Abel, Waynesville, N. C.

Secretary-Treasurer—Dr. J. R. McCracken, Waynesville, N. C.

The management announce a reorganization of the staff of the well known Magdalene Hospital of Chester, S. C., effective January 1st as follows:

Dr. S. W. Pryor, Chief Surgeon; Dr. R. H. McFadden, Surgery; Dr. H. B. Malone, Medicine and Paediatrics; Dr. D. A. Hennies, Diseases of Digestion, Roentgenology and Pathology; Miss B. E. Brady, Superintendent.

Dr. Lewellys F. Barker, Baltimore, Md., has accepted an invitation from the Mecklenburg County Medical Society, Charlotte, N. C., and will deliver an address before the Society at the meeting in Charlotte on January 23, 1915. A number of prominent out-of-town guests have announced their intention to be present. Dr. Barker's topic: "Some Typical Disorders of the Glands of Internal Secretion."

Dr. B. E. Washburn, who has for some years past performed such efficient service in the "hookworm" department of the North Carolina State Board of Health, and since May of last year as "Wholetime County Health Officer for Nash County, N. C., has resigned the latter position and accepted an appointment with the International Health Commission in which service he will perform duties similar to his hookworm work in North Carolina. He will go at once to British Guinea and the West Indies. He is succeeded in Nash County health work by Dr. W. H. Kibler who has done excellent service with the North Carolina State Board of Health.

A recent issue of the U. S. Public Health Bulletin contains detailed mention of the very excellent public health work done in Cape Fear Township, New Hanover County, N. C., which one year ago inaugurated a systematic campaign for betterment under the combined auspices of the North Carolina State Board of Health and the U. S. Public Health Service in Wilmington, N. C. As a re-

sult of one year's work it is officially reported that every school house and every home in the township is provided with standard sanitary conveniences. If there is another township in the South or elsewhere that can present such a splendid showing attested by U. S. official records, we would be glad to be advised of its existence and location. Unquestionably the oft-repeated statement that the Southern States are more rapidly going forward in sanitary development in rural districts must be correct, though there is but a beginning made in the work to be done, and citations as the above should merely have the effect of stimulating to better endeavor.

The recent report of the Directors of the State Hospital for Insane at Morganton, N. C., shows the present capacity of the institution taxed to the utmost, caring for at this time 1356 patients in the central buildings and the colonies. Resolutions were adopted urging the appropriation by the coming legislature of \$60,000.00 for additional buildings and \$60,000.00 for betterments of the water system.

Drs. Chase P. Ambler, Asheville, and **J. F. Rhem**, New Bern, two of North Carolina's well known physicians were recently elected by the North Carolina State organization of the Mystic Shrine, representatives to the Imperial Council.

Supreme Court Justice Blanchard of New York State in a recent divorce suit held that tuberculosis contracted by husband or wife, prior to marriage, and concealed from the other party, was sufficient grounds to warrant a divorce. With a very influential portion of the profession believing and teaching that fully 90 per cent. of all cases of tubercular infection are contracted during the first five years of life, and the farther well grounded belief that a majority of all civilized people are affected with tubercular disease at some period of their lives, it is quite manifest the learned jurist is to put it mildly, very favorably inclined to liberalism in the severing of the marital ties.

"The Drummer" is the name given to a very attractive private apartment in the Presbyterian Hospital of Charlotte, N. C., which has been recently fitted up by the various traveling men's associations doing business from that thriving manufacturing center.

The Buncombe County Medical Society, Asheville, N. C., elected the following officers for 1915 at the annual meeting December 21, 1914:

President—Dr. Eugene B. Glenn.

Vice-President—Dr. W. C. Brownson.

Secretary-Treasurer—Dr. Gaillard S. Tennent.

House of Delegates—Drs. Thompson Frazier, D. E. Sevir and I. J. Archer.

Alternates—Drs. W. P. Herbert, J. E. Cocke, J. M. Lynch, all of Asheville, N. C.

The annual dinner of the Buncombe County Medical Society was held at the Grove Park Inn, Asheville, N. C., on the evening of December 21, 1915. Dr. Lewis W. Elias, toastmaster. Nearly all of the seventy-one members were present and a few out of town invited guests including Drs. J. Howell Way, Waynesville; Earle Grady and E. M. Sally, Tryon; J. S. Brown, Hendersonville. Toasts were responded to by Drs. L. B. McBrayer, President of the N. C. State Medical Society, Dr. I. J. Archer, Dr. Thompson Frazier, Dr. A. F. Reeves, Dr. J. Howell Way, Dr. Paul Ringer and Dr. C. M. Rakestraw.

The Columbia, S. C., Medical Society at the December meeting elected the following officers for 1915:

President—Dr. Percy V. Mikell.

Vice-President—Dr. J. H. Taylor.

Secretary-Treasurer—Dr. Edyth Welbourne.

Delegates to the annual meeting State Medical Society of South Carolina to be held in Greenwood, S. C., April, 1915: Drs. Theo. M. DuBose and Geo. Bunch.

Hold-over delegates from election 1913, Drs. LaBruce Ward, F. A. Coward. All of Columbia, S. C.

At the First Presbyterian Church in Durham, N. C., on December 12, 1914, Miss Helen Gribble of that city became the bride of Dr. Foy Roberson. The bride is one of the city's fairest daughters, the groom is a young physician of much promise and the felicitations of The Journal are theirs.

The twenty-seventh annual session of the Southern Surgical and Gynaecological Association was held at Asheville, N. C., December 15-17, 1914, under the presidency of Dr. J. Wesley Long, Greensboro, N. C. More than three-fourths of the limited membership (only 200 members being permitted by its laws) were present and of the fifty papers listed on

the program more than three-fourths were read by their authors. Nearly 100 visitors from various sections of the country were present and interested in the excellent papers and discussions. The "waiting list" of applicants for membership is said to contain 85 names of well known surgical workers. From the "waiting list" were elected the following new members: Dr. W. L. Cousins, Portland, Me.; Dr. L. Landry, New Orleans, La.; Dr. G. B. Rhodes, Cincinnati, O.; Dr. Doane Lewis, Chicago, Ill.; Dr. W. A. Downes, New York City, N. Y.; Dr. J. Bailey, St. Louis, Mo.; Dr. Joseph Tabor Johnston, Washington, D. C., and Dr. N. Shilling, Cedar Bayou, Texas, were elected to honorary membership. Cincinnati, O., was selected for the meeting of 1915. The following officers were elected for 1915: President, Dr. Bacon Saunders, Fort Worth, Texas; Vice-Presidents: Drs. Thos. S. Cullen and S. M. D. Clark, New Orleans, La.; Secretary, Dr. W. D. Haggard, Nashville, Tenn.; Treasurer, Dr. LeGrand Guerry, Columbia, S. C.

Dr. W. R. Brandon, having recently completed an eighteen months' service in postgraduate work in Baltimore, has located at Midway, N. C., where he will do general practice.

Dr. J. F. Rhem, New Bern, N. C., has recently been elected Provincial Grand Master of the Masonic Order of Colonial Masters, membership of which order is limited to Past Masters of Masonic bodies organized in America prior to the Revolution.

Dr. Francis J. Clemenger, Asheville, N. C., has returned home after two years' study in the laboratory of Sir Almoth Wright, London, England.

The annual convention of the Georgia Surgeons Club will be held in Atlanta, Ga., at the Hotel Ansley February 25, 26, 1915. An elaborate banquet has been arranged for the evening of the 25th at which time a symposium on "Indigestion, its Causes and Treatment" will be discussed. Extensive clinics and many social courtesies will be given the visiting surgeons during their stay in the city. The question of enlarging the membership in the club to include Southern Surgeons in general will also be considered. The officers for the session are:

President—Dr. E. C. Davis, Atlanta, Ga.

Vice-President—Dr. T. J. McArthur, Cordele, Ga.

Secretary-Treasurer—Dr. R. M. Harbin, Rome, Ga.

Dr. J. A. Anderson for seven years past a leading practitioner of McAdenville, N. C., has removed to Charlotte, N. C., where he has engaged in general practice.

Dr. J. T. Johnson, of Hickory, N. C., and one of the oldest practitioners of medicine in the State died December 24, 1914, in his seventy-ninth year. He was a veteran of the Civil War, entering the Confederate service in March, 1861, as second lieutenant, Co. K., 35th N. C., and being taken prisoner by the Federals April 1, 1865, with the rank of Colonel. On his release from the famous Johnson's Island, O., prison in June, 1865, he returned to Hickory, N. C., studying medicine later at the University of Pennsylvania and spending the remainder of his days in earnest laborious effort among his people. An active and influential member of the Methodist Church, he exercised a potential influence in the community for every good purpose, and it is said of him that he was one of the most highly respected and best loved men of the community where he lived for more than sixty years.

Dr. Calvin J. Parlier, Blowing Rock, N. C., died at the Charlotte Sanatorium, Charlotte, N. C., December 16, 1914. He was a native of Wilkes County, N. C., spending his boyhood and most of his life there until some years since he removed to Blowing Rock, Watauga County, N. C., where he enjoyed in marked degree the confidence of the community as physician and friend. In addition to being active in professional work Dr. Parker was president of the local bank, and a man of affairs in the town and county. A man of most charitable traits of character, his going will be noted by the many who were the frequent recipients of his favors.

Dr. C. F. Dowd, Willow Springs, N. C., passed this life at his home November 30, 1914, where he had lived for many years and enjoyed the respect of his fellows. He was a first honor graduate of the University of North Carolina in its academic school and later a graduate of the University of Pennsylvania medical department. For many years he enjoyed a large practice in Wake and adjacent counties until attaining the age of sixty he retired on account of ill health. Dying

at the ripe age of seventy-four he left a record of having been a man of great intellectual ability, a lover of truth, and a faithful adherent of the religious tenets preached by his sainted father who was for many years one of North Carolina's best known Baptist divines.

Clemson College, South Carolina's great agricultural and Mechanical College is to have a new modern hospital for the treatment and care of the members of the student body. Ward service for 36 cadets and 12 private rooms with first-class appointments as to operating rooms, etc., will complete the equipment of what is intended to be a model institution.

The antityphoid vaccination work of the South Carolina Board of Health during the past year was very successful, more than 40,000 doses having been used with satisfactory result. The Board will ask the legislature for additional funds and assistants to enable it to keep pace with the demands now being made by the public on the Board for work of various kinds.

Dr. Chesterfield C. Leech, Hickory Grove, S. C., died at his home December 12, 1914, in his fortieth year. He leaves a wife and three little daughters who cherish the respect and honor of the community to which the faithful doctor gave the service of his life. A member of the A. R. P. Church, an upright citizen, a man of integrity, Dr. Leech was a fitting representative of the many good men of our profession who quietly spend their days in toilsome service for the good of their fellows, but whose goodly deeds ever live after them.

The Tri-State Medical Association of Arkansas, Louisiana, and Texas held its annual meeting in Shreveport, La., December 8 and 9, 1914. The following officers were elected:

President—Dr. W. G. Hartt, Marshall, Texas.

Vice-Presidents—Dr. Oscar Dowling, Shreveport, La., and Dr. E. L. Beck, Texarkana, Texas.

Secretary-Treasurer—Dr. J. M. Bodenhimer, Shreveport, La.

The session of 1915 will be held at Marshall, Texas.

The beautiful country residence of Dr. Thos. P. Cheeseborough, two miles south of Asheville, N. C., was destroyed by fire on the night of December 26, entailing a

loss of more than \$15,000.00, only partially covered by insurance.

At Asheville, N. C., on December 29 Dr. G. F. Leonard, formerly of Lexington, N. C., now of Washington, D. C., was wedded to Miss Jesse Rowe Williams. After a visit to Florida, the happy couple will reside in Washington, D. C., where Dr. Leonard is regarded as a young medical man of promise.

Dr. Edward A. Hines, Seneca, S. C., Secretary-Treasurer of the South Carolina State Medical Association, and editor of the Journal of the Association published monthly, has been appointed Superintendent of the Anderson County, S. C., Hospital at Anderson, S. C. Dr. Hines, it is stated, will give half his time to the duties of the hospital, and beginning with the new year will have the assistance of a staff of collaborateurs on The Journal. His address will continue as before, Seneca, S. C.

The trustees of the Grady Hospital of Atlanta, Ga., have denied the application of the Eclectic physician of that city for representation on the staff of the institution. The regular medical profession, led by Dr. Willis Westmoreland, entered formal protest against the action of the city council in approving the proposition of the Eclectics, and after carrying the matter before the hospital trustees directly secured a repeal of the council's action as indicated above.

Dr. J. N. Gill, Weaverville, N. C. has brought suit in the superior court for \$5,000.00 damages for alleged injuries sustained by Dr. Gill when run down by the defendant's automobile a few months since. Dr. Gill spent some time in a local hospital and has only recently resumed his professional duties.

Drs. A. J. Crowell and J. W. Squires, Charlotte, N. C., announces having associated with them additional assistance in Drs. Robt. H. Lafferty and S. R. Thompson two well known specialists.

On December 1, 1915, in Columbia, S. C., Dr. Matilda Evans of that city, a colored female physician, opened to the public a small private medical and surgical hospital which will be used for her own patients and receive those of others as well.

Dr. W. L. Rodman, Philadelphia, Pa.,

President-elect of the American Medical Association, who had been for several days the houseguest of Dr. Lynn McIver, Sanford, N. C., (a former student of Dr. Rodman's) was the honor guest at the Fifth District Medical Society of North Carolina held in Sanford, N. C., on December 1st. Dr. Rodman's address on "Cancer" was timely and well received. A number of additional papers read by well known Carolina doctors, among them Drs. H. A. Royster, Raleigh; L. B. McBrayer, Sanatorium; A. H. Blair, Southern Pines; Gilbert McLeod, Carthage; Dr. J. W. Halford, Lillington, N. C., was elected President; Dr. A. B. Croom, Maxton, Secretary; Dr. Roscoe McMillan, Red Springs, Treasurer. The next session will convene in Aberdeen, N. C.

Dr. L. B. McBrayer, President of the North Carolina State Medical Society, and Superintendent of the North Carolina State Sanatorium for Tuberculosis, Montrose, N. C., is quite actively attending the various local medical societies as well as constantly availing himself of frequent opportunities to engage in the important work of public education in scientific hygiene and sanitation.

In the Superior Court at High Point, N. C., a nonsuit was recently ordered by the trial judge in a suit brought against the city for \$10,000.00 damages on account of the deaths from burns of a little child contracted while playing near some burning leaves in the city street.

The Baptist State Convention of South Carolina have agreed to donate the sum of \$6,000.00 from its current funds in 1915 for the care of indigents in the Baptist State Hospital of Columbia, S. C.

The Seaboard Medical Association of Virginia and North Carolina met in 19th annual session in Goldsboro, N. C., under the presidency of Dr. J. Rainey Parker, of Goldsboro, N. C., on December 8, 1915.

The session was well attended and scientific papers of much merit were presented by leading practitioners of the eastern shore of Carolina and Virginia. Norfolk, Va., was selected as the 1915 meeting place with the following officers:

President—Dr. Israel Brown, Norfolk, Va.

First Vice-President—Dr. C. F. Griffin, Winton, N. C.

Second Vice-President—Dr. B. R. Kenyon, Norfolk, Va.

Third Vice-President—Dr. J. R. Par-

ker, Gatesville, N. C.

Fourth Vice-President—Dr. John Winston, Norfolk, Va.

Secretary—Dr. C. P. Jones, Newport News, Va., re-elected.

Treasurer—Dr. Geo. A. Caton, New Bern, N. C., re-elected.

Dr. W. L. Rodman, President A. M. A., was an honored guest and addressed the Association on "Cancer." Dr. Cyrus Thompson, of the North Carolina State Board of Health also delivered an address on public health.

The Gaston County Medical Society held a banquet at Gastonia, N. C., December 3, at which in addition to the members there were present as guests of the medical society the school officials of the city and county. Dr. D. A. Garrison, Gastonia, N. C., was toastmaster and the special features of the discussions were along lines of public hygiene and health betterment for the schools. The affair was well attended, the menu elaborate, and the occasion a great success in every way.

The thirty-first annual meeting of the Tri-State Medical Association of Tennessee, Arkansas, and Mississippi was held in Memphis, Tenn., November 17-19, 1914, under the presidency of Dr. John Darrington, of Yazoo, Miss. The attendance was large, and the exercises instructive and entertaining. The following officers were elected for the ensuing year:

President—Dr. W. P. Hicks, Earle, Arkansas.

Vice-Presidents—Dr. Vernon Dickson, Covington, Miss; Dr. E. R. McLean, Cleveland, Tenn.; Dr. J. L. Hare, Wynn, Ark.

Secretary—Dr. J. L. Andrews, Memphis, Tenn.

Treasurer—Dr. J. A. Vaughan, Memphis, Tenn.

At the January meeting of the Winston-Salem Board of Aldermen, it was voted to organize a complete health department for the city, and to secure the services of a competent trained whole-time health officer for the city.

The County Commissioners of Pitt County, (Greenville), N. C., voted at the January meeting to establish the "whole-time county health officer," and the officials are receiving applications for the position. There is a manifest disposition in the Carolina counties to secure as far as may be possible for these positions only really competent men, and not allow them

to become the "cities of refuge" for unsuccessful practitioners or professional ne-er-do-wells. Up to this time the medical men in this State who have been invested with this new official position have been as a rule capable, competent, physicians with special bent in the direction of public health work, and all over the State, there is little but praise for their excellent work.

Durham, N. C., begins the installation of a splendid new system of municipal water works at a cost of \$550,000.00.

Dr. Louise Anderson Merrimon, for 11 years past the valued professional associate of Dr. H. H. Briggs at Asheville, N. C., was married on January 6, 1915, in Cincinnati, O., to Mr. Nelson R. Perry, and will spend the winter in California. Dr. Merrimon was an accomplished young woman physician, much loved and respected within and without the profession in Asheville, and will long be remembered for her excellent work in her specialty as well as for large and zealous efforts in behalf of the public charities of the mountain city. It is expected she will later reside in Asheville, N. C.

The Asheville, N. C., Ministerial Association passed resolutions January 4, 1915, giving cordial endorsement to a bill before the present session of the legislature looking to throwing greater restrictions around marriages in North Carolina.

It is understood that the Better Babies Camp at Saluda, N. C., a Spartanburg, S. C., organization which accomplished much good for teething infants in South Carolina during the past summer by carrying them to the North Carolina mountains, will operate the coming summer upon an enlarged scale extending the scope of its operations to include a number of other South Carolina towns in the list of its clientele.

Drs. G. W. Purefoy and M. H. Fletcher, Asheville, N. C., were recently elected members of the Buncombe Board of Health.

Greensboro, North Carolina.

Editor Charlotte Medical Journal:

I beg to note, and to add to a late paper in The Charlotte Journal by Dr. M. G. Perrow, of Lynchburg, Va., in which he mentions the importance of pure butter.

In 1886 Congress permitted the manu-

facture of adulterated butter. Such butter is like so-called rectified or blended whiskey, which according to authority from Washington, can contain "any material." Process or renovated butter is better protected, for it is considered adulterated when a filthy, decomposed, or a putrid animal or vegetable substance is added. There are butters and butter: "Ladled," "Sweet," and "Whey."

Adulterated butter may be defined as anything directly or remotely gotten from the udder of the cow, in which acids, alkalis, chemical, or "any substance whatever" is used for the purpose of deodorizing or removing rancidity, or any butter or butter fat with which there is mixed any substance foreign to butter "as herein defined."

It is manifestly a stultification of the Pure Food Law that the government should derive revenue from such so-called butter.

In the absence of pure butter, preferably creamery, only oleomargarine, or some such compound should be legal. The word butterine has been ruled out.

From a dietetic standpoint oleomargarine is much more valuable than butter. I mean the original oleomargarine.

THOS. R. EVANS, M. D.
Resident Physician Glenwood Park Sanitarium.

Clinical Conference, Second Division. Neurological Institute, New York SYPHILITIC MUSCULAR ATROPHY.

Dr. Junius W. Stephenson presented a case of a married man age 42 who denies all venereal infection but admits excessive use of alcohol for 15 years. Father of two children, wife no miscarriages. History antedating present illness uneventful. Eighteen months ago patient noticed a weakness of his left hand which rather rapidly for several weeks after which patient states it has remained stationary. About six months thereafter the right hand was attacked in the same manner and progressed quite rapidly for a period of several weeks when it is said to have become stationary. There has been no pain or paresthesia. Physical examination reveals drop wrist with wasting of the thenar and hypothenar eminences more marked in the left hand; also there is considerable wasting of the interossei more marked in the left hand; extensors of both wrists are very weak causing a double wrist drop. There is a slight thinning of left deltoid. The right knee jerk is present but very sluggish, the left is questionably elicited un-

der reinforcement, ankle jerk not elicited. Plantar flexor, abdominal and epigastric active and equal. There are no sensory disturbances. The pupillary mobility is good, no nystagmus or diplopia. The right pupil reacts somewhat slowly to light the left fair; there is a slight irregularity of outline. There is a perforating ulcer under the right great toe of one year's duration and patient states that five or six years ago he had "perforating ulcers" under both great toes which is said to have responded to treatment.

Electrical reaction of atrophied muscles as follows: Muscles of thenar eminence of left hand show very slight response to full faradic coil CCC—ACC. The other muscles of left hand show slight hyperexcitability to faradism, galvanic ok. Muscles of right hand respond to increased amount of both currents. Left shoulder ok.

Serology-serum Wasserman positive, spinal fluid Wasserman positive, no globulin excess, 28 cells per cu mm, reduced Fehlings solution. Urinalysis negative and blood for lead negative.

The clinical course and serological findings leave no doubt as to the diagnosis of this case which I present as a muscular atrophy of luetic origin the pathology of which, though not as yet universally accepted, is probably a luetic endarteritis with thrombosis of the anterior horn vessels. Of course the condition of the various reflexes also indicate posterior column involvement and the case might be considered a case of tabes with atrophy, but the clinical course is so characteristic of the condition described by Dr. Dana as syphilitic muscular atrophy in which he recognizes a distinct neurological entity that I desire to present the case as an example of it.

FUNCTIONAL DYSPHONIA.

Dr. Foster Kennedy presented Dr. W. G., age 49 years, complaining of difficulty of phonation, that the voice is hoarse and as it were cramped.

Patient is married and has two healthy children. Lues is denied and the Wasserman reaction is negative. An important factor is aetiology is that from the age of four to six years, patient suffered much from asthma. For the past ten years he had yearly attacks of acute laryngitis, accompanied by hoarseness, without folliculitis or temperature.

Six years ago, had an attack of left sided circumscribed pleurisy without effusion. Two years ago had an attack of laryngitis similar in every way to those he was accustomed to, with the excep-

tion of the fact there occurred a laryngeal hemorrhage of over $\frac{1}{2}$ oz. of blood. The hoarseness persisted getting neither materially better nor worse since that time.

Patient smokes 20 cigarettes and two pipes daily. No alcohol. General health excellent. Hoarseness is definitely better in the evening after a hard day's talking than it is in the morning. Patient is a thin wiry man of tense active character. Pupils are normal in size, position and reactions. No weakness of the facial muscles. Fifth nerve normal. Fundi normal. Tongue mesially protruded and shows no fibrillary twitchings.

Laryngoscope shows a moderate congestion pharynx, with good movements of the vocal cords, that on the left side being slacker than that on the right. Palatal and pharyngeal sensation is present but diminished. Palatal reflex present but sluggish (due to tobacco) right and left sides. No trouble in swallowing. No sensory changes. Reflexes everywhere brisk and equal and of normal type. The sterno mastoid muscles are both very small, left smaller than the right. Reaction to galvanism good and brisk. The right upper trapezius muscles is smaller than the left; the triceps R & L is weak. No qualitative electrical change.

It is noticed that the patient uses his diaphragm but little when silent and not at all when speaking. He speaks without taking breath in the middle of his sentences, and during speech his throat is held in the position of extreme expiration.

This patient has been seen by many eminent laryngologists, and many different diagnoses have been made in the case. The majority of opinions have ascribed his condition to the existence of acute laryngitis, on what seems to be insufficient grounds. The organic asymmetries described i. e., the smallness of his sterno mastoid muscles and the inequality in size of the trapezii are put down, not because it is thought they explain the condition of speech, but in order to be certain that the existence of some organic lesion might not be overlooked.

The patient is shown as a case of functional anomaly of speech and respiration founded on an asthetic basis. It is believed that respiratory education with result in the restoration of normal localization.

PSYCHOGENIC CONVULSIONS—A WISH FULFILLMENT.

The following case was presented by Dr. Thaddeus Ames and Dr. Russell MacRobert as an example of psychogenic convulsions the result of a wish.

X is a girl, age 18, who entered the Neurological Institute November 7, 1914, with a history of left sided convulsions for the past four years. She has been under the care of various physicians during this time without any amelioration in the frequency or severity of her attacks. Her history showed an attack of spinal meningitis at eight years and inability to walk diagnosed nervous prostration at eleven years and a short attack of acute articular rheumatism at sixteen. Her family history was negative as far as mental and nervous disorders are concerned. Her neurological examination was negative. She complained of some irregularity of menses and constipation. She attributed this to treatment during the past eight months with bromide and daily enema. Her first attack occurred in August, 1910. It has recurred at intervals of from four days to two months during the past four years with a single long interval of 10 months three years ago. Three days after her admission to the hospital she had an attack of violent left sided convulsions which lasted 15 minutes and in a measure for thirty-six hours. She was presented at the weekly conference during this attack and it was generally agreed that the attack was the expression of a functional disorder. She lay on the bed mostly on the right side with both legs drawn up and the left leg and arm jerking in irregular clonic spasms which were marked with great vigor and rapidity. The left arm was fully extended, the hand was turned with the palm outward and the back of the hand turned toward her. In each spasm the arm was thrust away from the body, the hand in a tense position. Between the spasms there was a slight relaxation of the hand and the arm was brought nearer the body. The leg muscles flexed during the spasm raising the knee toward the abdomen, and relaxed between the spasms. Each twitching of the series of spasms constituting the attack consisted of a synchronous pushing of the hand out from the body, drawing the knee toward the abdomen and crossing it over the right thigh. The right side had no convulsive movements except those caused by the violence of the attack on the left side. There was no loss of consciousness or biting of the tongue nor incontinence. Her corneal

and pharyngeal reflexes were present. The pupils responded promptly to light and accommodation; the reflexes were all normal and equal. There was no headache or mental confusion. There was no restriction of the visual fields nor cutaneous anesthesia. She had none of the usual stigmata of hysteria. It was decided to ascertain what were the causative psychic influences. It was assumed at the outset that the convulsions were the result of a repressed wish, that something was obtained by the patient in this way that could not be obtained in any other manner. We wish to find out what significance the motion of the attack had for her and we proceeded to learn about her life associations, habits and worries. After several conversations she talked more freely about these things. She confessed to the habit of masturbation and admitted much worry and a great deal of shame for this habit. She had often prayed that she might overcome it. She believed she would never have had this habit if it had not been for her sister. Then it was learned that the habit had been introduced by the sister practicing it on her. For several years the sisters slept together, the sister always on the left side of the bed. About a year after the commencement of the practice patient began to resist her sister doing this. She explained how she would turn away from her sister. By turning on her right side, drawing up her left thigh and shoving the sister away with the left hand. This usually sufficed. Both sisters were very much ashamed of the habit and did not speak of it to one another. The mutual practice was stopped all together after about one year. The patient continued the habit by herself but secretly blaming her sister whom she held responsible. On the evening of the first convulsive attack the two sisters were going to a church concert; the patient was considerably irritated and angered by her sister for her slowness in getting ready. Patient expressed her anger only by making her actions more deliberate and increasingly slow. They joined two companions and went to the concert during which the first attack occurred.

This attack was similar to those that followed and like the one already described. She was helped out by her sister and another girl. She recalled very vividly recoiling from her sister's help and turning towards the other girl who was on her right. She now sees the similarity of the attack to the former manner of protecting herself from her sister, and realizes her

turning away as an expression of hatred and disgust for her sister. The first attack was produced by an outburst of intense feeling for her sister. She had been continuing the habit by herself with great mental conflict but excusing herself by blaming her sister. This manifestation of blame to her sister was expressed by the attitude of her attack which had been provoked by her sister's taunts an hour before. She has continued the habit up to the present time, because she wanted to. There was considerable shame and she knew she must have an excuse. She excused herself by blaming her sister, by appearing to keep up her resistance to her sister in the form of these attacks. This relieved her feelings and allowed the habit to continue unchecked. She does not now blame her sister and sees the attack is unnecessary. She even sees that now having no excuse will assist her in checking her bad habit.

BOOK NOTICES.

Child Training as an Exact Science. By George W. Jacoby, M. D. With full bibliography and thorough index. 384 pages, 15 full page illustrations. \$1.50 net; by mail, \$1.62. Funk & Wagnalls Company, Publishers, New York.

This little volume was prepared for, and is very essential to, the teacher, parent, and the physician. It is a treatise based upon the principles of modern psychology, normal and abnormal. Pedagogy and medicine in themselves are distinctly separate fields of science. The former is concerned only with the mental and moral development, the latter only with the physical development of the child. The points of contact between the two become apparent only when it is realized that children with bodily abnormalities of development as a rule also show disorder in their mental development, and vice versa.

Of course there are children who, notwithstanding physical infirmities, develop mentally in a normal manner, just as there are children in whom, notwithstanding normal bodily development, mental defects may be recognized. These however, are the exceptions and cannot be taken as a guide for an educational treatise. The basis of all pedagogic training must be the general assumption that only in a healthy body can there exist a healthy mind, one capable of harmonious development. It is quite necessary that the physician and the teacher co-operate in

the education of a child. Systematic cultural direction of the child's mental life necessarily calls for a certain knowledge of the nervous system and its functions, the teacher must understand the art of observing, and must be sufficiently versed in physiological psychology to differentiate the normal and the "atypical" and to distinguish between fault and disease.

Dr. Jacoby in this book has given just the kind of knowledge that is necessary in the school room, he has not tried to cover a large field but has limited himself to medico-hygienic scientific material.

The reviewer feels sure that the results of *Child Training* will be quite satisfactory to the author.

Specific Diagnosis and Specific Medication. By John William Fyfe, M. D., Formerly Professor of Specific Medication in the Eclectic Medical College of the City of New York; author of "Essentials of Modern Materia Medica and Therapeutics," President of the Connecticut Eclectic Medical Association; President of the Connecticut Eclectic Medical Examining Board. Together with abstracts from the writings of John M. Scudder, M. D., and other leading authors. The Scudder Brothers Company, Cincinnati, Ohio. Price \$5.00.

This book is based on the writings of Dr. Scudder and more recent authors and includes the personal observations of the writer, Dr. Fyfe. The latter has practically given us a new book though he has taken from Dr. Scudder's work many very essential points and incorporated in many instances Professor Scudder's unique arguments and forceful diction. The parts of the book written by Dr. Fyfe are very valuable and very interesting.

The first idea of Dr. Fyfe was to revise Professor Scudder's works with a few alterations but after commencing the work he found that so many changes had been made in eclectic diseases in the last twenty odd years that it was almost impossible to carry out his original plan and the proper course for him to take was to practically write a new book. This he has done and done well.

Every one who is interested in eclectic medicine can do no better than to add this volume to his library. It is a neatly gotten up book containing 784 pages. The index is unusually complete. The author's remarks under the head of con-

tageous diseases, endemic diseases, sporadic diseases, and general and local diseases are very interesting indeed. These remarks alone are almost worth the price of the book. It gives the reviewer pleasure to recommend it.

Studies in Abnormal Psychology. Editor, Morton Prince, M. D., LL. D., Tufts College Medical School. Assistant Editors, Ernest Jones, M. D., M.R.C.P., University of Toronto, and J. S. Van Teslaar, M. D., Boston. Associate Editors, Hugo Munsterberg, M. D., Ph. D., Boris Sidis, M. A., Ph. D. M. D. and others. Series Four. Richard G. Badger, The Gorham Press, Boston. Price \$2.50.

In view of the great importance of the contributors of eminent specialists in psychology which have been published in *The Journal of Abnormal Psychology*, and the increasing demand for the same, the publisher has been encouraged to re-issue such numbers as are in print, in order that this valuable material may be more accessible to the general reader. The first series contains the articles published in the issues of the magazine from April, 1910, to March, 1911, inclusive; the second series those published from April, 1911, to March, 1912, inclusive; the third series those published from April, 1912, to March, 1913, inclusive, and the fourth series from April, 1913, to March, 1914, inclusive.

Many of the earlier numbers of the magazine are already out of print, so that no collected volumes can easily be made to cover their contents.

This volume contains 428 pages and is well bound and printed on good paper. I am sorry a book of this value is not more completely indexed. It gives in a very brief way the contents of series number four, mentions the subjects and also gives the names of the contributors. A fuller index would add much to the value of the volume. With this slight defect the volume is exceedingly valuable to everyone who is interested in psychology. Every physician or specialist who has anything to do with this class of troublesome patients ought to have the book for reference.

International Clinics, A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, paediatrics, obstetrics, gynaecology, orthopaedics, pathology, dermatology, ophthalmology, otology, rhinology,

laryngology, hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A. with the collaboration of others. Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Geneva. Volume IV. Twenty-fourth Series, 1914. Philadelphia and London: J. B. Lippincott Company. Price \$2.00.

Possibly this number of *International Clinics* is superior to most of the previous volumes though the illustrations are not so numerous as I have seen in former volumes. Yet they explain the text in a very accurate and interesting manner. They exhibit fine art work which is very valuable in all illustrations. The artist's work has been wonderfully developed during the last twenty years to the great advantage of our authors and this circumstances has been taken advantage of by the publishers of this most magnificent series of clinics.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. December, 1914. Published Bi-Monthly by W. B. Saunders Company, Philadelphia and London. Price per year: \$8.00.

Possibly on account of the illustrations of Dr. Murphy's offices, the offices of his several assistant's, his library reading rooms, etc., this volume is of more than usual interest. The Doctor's environments are certainly magnificent and attractive.

We always find the illustrations in these volumes of a very fine order. It is difficult to find illustrations in any book that are superior and it is seldom you see any that equal them. Every surgeon, and even physicians who do not make a specialty of surgery, could do no better than to subscribe to this series of Murphy's Clinics.

The Clarion. By Samuel Hopkins Adams. With Illustrations by W. D. Stevens. Boston and New York. Houghton Mifflin Company. The Riverside Press, Cambridge. 1914. Price \$1.35.

This is one of the most interesting novels that it has been my pleasure to look over for quite a while. At the present time it is capable of teaching a lesson in as much as there are so many reforms in magazine advertising. It is safe to say that there is no one in America who knows more about newspaper methods

than Samuel Hopkins Adams, author of "The Clarion." Mr. Adams is best known to the public as the man who exposed the patent medicine frauds and was primarily responsible for the enactment of the Pure Food and Drug Act. This work led him into a study of newspapers and of what lay behind the "news" furnished daily to the American public. He had already had ten years of experience as reporter for a New York daily and this investigation, by giving him a wide knowledge of the business side of newspapers, left him thoroughly conversant with all aspects of modern journalism.

Hal Surtaine is the hero of the story. Shortly after his return from college he purchased the Clarion, a newspaper, because a few days previously it had refused to retract some charges published against his father and his father's business, Dr. L. Andre Surtaine, the opulent maker of "Certina."

Young Surtaine, the only son of a millionaire, starts out to run his paper with high ideals and the story is made up of the problems he has to meet and the difficulties he has to overcome. It gives a very graphic picture of the forces which control journalism and the relations between journalism and "business" and of the influence which the advertiser has on a free press.

The Philosophy of Radio-Activity, or Selective Involution. By Eugene Coleman Savidge, Member of New York Academy of Medicine, New York Obstetrical Society, American Medical Association, New York State Medical Society, Society Alumni Roosevelt Hospital; former Ass't Gynecologist, Roosevelt Hospital; former Attending Gynecologist, St. Mark's Hospital; author of "The Problem of Cancer, or the Philosophy of Malignancy." New York: William R. Jenkins Company Publishers, 1914. Sixth Avenue at 48th Street. Price \$1.50.

This book was intended originally as an introduction to the medical writings of the author, read before scientific bodies and published during the last two decades. The manuscript outgrew the original purpose however.

Radio-activity, while forcing a change in view point in all the sciences, is chiefly identified in the public mind as in mysterious relation with malignancy.

Though this relation will be seen to be very close, both as to cause and possibly cure, this forms but small part of the

general importance of the subject.

Nevertheless, as this is the point on which false hopes might work harm, the following quotation is taken from the writer's book on this subject, "the Problem of Cancer; or the Philosophy of Malignancy."

"April 10, 1914, the American Society for the Control of Cancer held its second meeting at the New York Academy of Medicine. Dr. Clement Cleveland presided, and the speakers were Dr. William J. Mayo, President of the American Surgical Association; Mr. Frederick C. Hoffman, life insurance statistical expert; Dr. Francis Carter Wood, Director of the George Crocker Research Laboratory, and Prof. J. Collins Warren, President of the Harvard Cancer Commission.

"Briefly stated, the dictum of this recent and authoritative body stands: "Surgery will cure practically all malignancy if action is taken at the start; Surgery is therefore always first, other measures second."

All surgeons and really everyone interested in this subject ought to read this book. It is not only interesting but very instructive. It has appeared at an opportune time when the professional mind has a tendency to study the problem of cancer and when Radio-Activity has attracted, and is now attracting, an immense amount of study. It seems to the reviewer that the writer had a fine opportunity to illustrate the book more thoroughly. The illustrations that he used, however, are quite good and illustrate beautifully the text.

There are 151 pages of text and the index is accurate and complete.

Fever Its Thermotaxis and Metabolism. By Isaac Ott, A. M., M. D., Professor of Physiology Medico-Chirurgical College, Philadelphia, Member of American Physiological Society, Ex-president of American Neurological Association, etc. Paul B. Hoeber, 67 E. 59th St., New York, 1914. Price, \$1.50 net.

This book of 166 pages is a small one containing three lectures that were delivered before the Sophomore Class of the Medico-Chirurgical College. They were so favorably received that it was believed by the publishers that it would be well enough to put them in volume form. The subject the author deals with is, of course, one of maximum importance to the medical profession, especially the general practitioner. The author has been a practicing physician for many years and these

lectures are based mainly upon personal experiences. As stated above, the price is only \$1.50 and anyone who is especially interested in this subject will do well to add the book to their library.

Tuberculosis: Its Cause, Cure and Prevention. A revised edition of "The Great White Plague." (A book for laymen) By Edward O. Otis, M. D., Professor of Pulmonary Diseases and Climatology, Tufts College Medical School; late President of the Boston Tuberculosis Association. Cloth, \$1.25 net. Pp. 326, with illustrations. New York; Thomas Y. Crowell Company Publishers.

The first edition of this book was published about five years ago with the title of "The Great White Plague." The writer correctly states that no startling discovery has been made either regarding the nature or the cure of Tuberculosis during this intervening period, nor have the methods of fighting the disease been materially changed. The open air treatment still maintains its supremacy and experience has demonstrated the value of the preventive measures then in use. The author makes the statement, which is unquestionably true, that the fight against the disease has become more universal and more determined and more intense with larger forces and material resources.

While the present volume has not changed very much in appearance and in the text from the first edition, yet a great many parts of the book have been almost rewritten and every phase of its treatment and prevention is brought up to date. Tuberculosis still prevails to an enormous extent but according to the author it is steadily decreasing and there is no reason to suppose that it will not continue to do so, though possibly not with the rapidity that it has done for the last five years.

By partly reading this book we infer that it is the belief of the writer that the way to eliminate Tuberculosis from this country is to prevent it.

The book contains 325 pages, the index is appropriate, and there are many beautiful illustrations which certainly add to the value of the book. Among the illustrations that are of value and interest might be mentioned the following: Davos in Switzerland, the Great Resort for the Tuberculous. The Walsh Window Tent. A Typical Open Air School.

Diseases of the Rectum and Anus. Edited by A. B. Cooke, A. M., M. D., formerly

Lecturer on Diseases of the Rectum and Professor of Anatomy in the Medical Department, University of Nashville; formerly Professor of Anatomy and Clinical Proctology, Medical Department, Vanderbilt University; Fellow of the American Medical Association; Fellow and sometime President of the American Proctologic Society, etc. Assisted by Wm. M. Beach, A. M., M. D., Pittsburgh, Penna., J. Coles Brick, M. D., Philadelphia, Penn., and several others. With 215 illustrations in the text and 21 full-page plates, 7 in colors. Philadelphia: F. A. Davis Company, Publishers. English Depot: Stanley Phillips, London, 1914.

This is a book of very great value. I think it is one of the best written and most appropriately and extensively illustrated books that has ever come to this office, and it gives me unusual pleasure to review it. It contains 619 pages and the immense amount of original work done on it possibly exceeds that done on any book of its size that I have had the pleasure of reviewing for the last few years.

The literature on this subject up until a few years ago was quite limited and the few books written on the subject were, compared with this one, rather crude. This book is not only scientific but it is written in a practical style. The author has drawn heavily upon his personal experience. As a whole I will say that the volume gives very authoritative teaching upon this subject. It is evident that it fills a need. Price, \$5.50.

Recreations of a Physician. By A. Stuart M. Chisholm, Author of "The Independence of Chile." G. P. Putnam's Sons: New York and London. The Knickerbocker Press. 1914. Price, \$2.00.

This volume is of special interest from a literary standpoint. It is interesting and from many standpoints a very valuable volume. It is made up of many essays read before different medical societies, some of which have appeared in medical journals. They were so unique, interesting, and valuable that it was thought appropriate and advisable that they be put in a more substantial form. The result is this handsome volume of 328 pages. The following are some of the very interesting essays that appear in this book:

Specialization.

Physicians as Men of Letters.

Banquo.

The Symbolism of Names.

Royal Authors.

The Inherent Spirit of Medicine.

On Some Translations of Horace.

Some Features of the Science of Medicine in the Seventeenth Century.

The Picaro in Fiction.

On the Prevention of Disease.

For any physician who feels lazy for a few hours, the reviewer knows of no book that will interest him more than this. While it is "Novel-like," it is semi-medical and will please the medical reader.

Urinary Diseases. By Stephen H. Blodgett, M. D. Whitcomb & Barrows, Boston. 1914. Price, \$1.00.

This book is a compilation of lectures delivered by the author on urinary subjects during the past few years before various training schools for nurses. The book is divided into three parts as follows: Part I. Urinary Diseases. Part II. Recipes for Patients Suffering from Glycosuria. Part III. Starch and Protein Content of Various Foods.

The second part of the book is possibly the most interesting. It would certainly be valuable to the average nurse. Really the other two parts may be of equal value. It is a nice book containing 127 pages, the index is appropriate and complete. It has only two or three illustrations but they are fine.

Abnormal Psychology. By Isador H. Coriat, M. D., Second Assistant Physician for Diseases of the Nervous System, Boston City Hospital. Neurologist to the Mt. Sinai Hospital. New York; Moffat, Yard and Company, 116 West 32nd Street. 1910. Price, \$2.00.

This book of 325 pages is unlike most of the books dealing with psychology. It fills a very valuable place in medical literature. There are certain parts of the book that ought to interest any medical man. The Modern Theory of Subconsciousness is an unusually interesting chapter another chapter of equal value and of equal interest is that on Analysis of Mental Life. I certainly advise my readers to get this book and look over it. It is not expensive, the price is only \$2.00.

Healthology (Health Study) In Three Parts. Part One—Practical Dietetics. How, When and What to Eat. Part Two—History of the Evolution of the Fasting Cure, Healthopathy. Part

Three—History of the Author's Thirty-One Days Without Food. Healthopathy (The Fasting Cure, Health Treatment). By Irving James Eales, M. D., D. O., S. Spring St., Belleville, Illinois, Co-Author and Publisher Eales' and Taber's Anatomical and Physiological Encyclopedic Chart of the Human Body; Formerly Professor of Physiological Alimentation and Hydrotherapeutics in the American College of Osteopathic Medicine and Surgery, Chicago. L. N. Fowler & Company, 7 Imperial Arcade, Ludgate Circus, E. C., London, England. 1913. Price, \$1.50.

This book is gotten up in a rather unusual style. It contains 326 pages and is neatly and attractively bound. Its index is quite defective. For a book of this character to carry advertisements in the back would not be allowed by any publisher that I know of.

The book seems to be a kind of family album. The author's picture appears a number of times, once in the front of the book as he looks now. Again it occurs on page 60 in a group including the various members of his family, again on page 70 cleanly shaved, again on page 120 when he was 34 years old. It occurs again on page 174 and on page 186. He must certainly be stuck on himself. On page 16 there is a picture of the author's wife on enamel paper, it is taken from a half-tone cut. On page 50, a picture of his daughter who is an osteopathic physician.

I am sorry but the reviewer is not well impressed with this volume.

Perceptions: A little booklet of verse; brief, fragmentary, just little soul-throbs without effort at polish or expansion. They are by Robert Bowman Peck, printed by Elkin Mathews, Cork St. London. One example—The Woman's Cry:

"For a child at my breast,
What would I not give?
All the great unrest
And my soul unshrived,
For a child at my breast."

For a child at my breast,
I offer the best
Of my blood and quest,
At life's strong behest,
For a child at my breast.

For a child at my breast,
God pity the rest,
Who can not Him meet
With a baby sweet—
For a child at my breast."

Leslie's Illustrated Weekly Newspaper.

Never before in the annals of the world has history been made so fast and furiously. A file of Leslie's for twelve months will make a volume well worth binding. Fifty years ago Leslie's gave to its readers what were then considered the best pictures of the Civil War and those who were fortunate enough to save their Leslie's of that day possessed volumes of great value. Today Leslie's has in Europe James H. Hare, easily the foremost of all intrepid war photographers and by a special arrangement with the London Graphic, the first of English pictorials, Leslie's is enabled to publish the Graphic's remarkable war pictures simultaneously with their appearance in London. The well-known war correspondent and photographer, Fritz Wagner is now in Germany as its special war correspondent. In Leslie's you get the best photographs and illustrations of two great publications. Send \$1.25 for a trial subscription for a quarter of a year, or \$5.00 for a full year's subscription which entitles the subscriber to answers, without charge, regarding investments, in the famous Financial Department, conducted for over a quarter of a century by Jasper, the well-known writer, under the heading of Hints to Money-makers.

"Theories may change, fads may come and go, but the true indication of a remedy is the same yesterday, today and forever." This statement is particularly applicable to Tongaline, which for more than 30 years has been a favorite remedial agent with thousands of physicians, through whose administration, it has relieved innumerable suffering patients.

A moment's reflection will make every physician realize the necessity for fresh materials for making remedies of animal origin, such as Thyroids, Corpus Luteum, Pituitary preparations, Pepsin, Pancreatin, Thymus, Parathyroids and things of the sort. There is so much probability of contamination when glands and membranes are shipped long distances that care must be used in specifying the brand with which prescriptions are to be filled. Armour & Company's facilities for collecting and handling this raw material are indisputably the best in the world and their finished products show that every advantage is made use of.

Pituitary Liquid, used so extensively and successfully in labor cases, is an illus-

tration of what can be done with perfectly fresh Posterior Pituitary substance. This is a water white solution and is free from albuminous matter. Pituitary Liquid is standardized physiologically By Roth's method.

Corpus Luteum is made from glands that are taken immediately after slaughter and is guaranteed to be true substance. No other house does or can give such a guarantee.

There is every reason why the doctor should specify Armour's when prescribing any of the organotherapeutic agents.

A Timely Contrast Between Europe and America.

Two things stand out unique and unforgettable in the contribution the year 1914 has made to the history of the world. One is America's greatest achievement; the other is Europe's colossal failure.

Civilization stands aghast at the collapse of European ideals. All the highest achievements of the nations, all the things that make for progress and freedom and justice, the work of a thousand years and the hopes of a thousand more,—all have been crowded back into the melting pot of brutal war. At its best war is barbarism. Brute-force belongs to the brute stages of human development. The wholesale carnage of these weeks in Belgium and France and Austria and on the borders of Germany and Russia is a triumph of the savage instincts in humanity. No matter who is responsible for it, the lining up for mutual slaughter of millions upon millions of men from the foremost nations of Europe, for the alleged purpose of settling some international dispute, is a blank denial of civilization, a crime against humanity, an apostasy from Christ.

Over against that ghastly failure of Europe is presented in America just now the celebration of a full century of unbroken peace between the greatest Empire the world ever saw and the world's greatest Republic. This is indeed the wonder of the world; more than 400,000,000 people of all races and colors and languages, covering over one-quarter of the land area of the globe, live at peace under one flag; under another flag live nearly 100,000,000 of as progressive people as the world knows; and these two flags for a hundred years, fold in fold, entwine in a common ideal, for a common purpose, to promote the freedom and progress and peace of all humanity. In these days, these days of staggering and bitterness, when the war-cloud of Europe looms blackest, when its

thunders speak of death and its lightnings flash of hell, I turn again to America, and, at the close of this unparalleled century of Anglo-American civilization, I thank God and take courage for all the world.—From "America's Achievement—Europe's Failure," by Dr. James A. Macdonald, in the American Review of Reviews for January.

Reprints Received.

The Question of Anaesthesia in Goitre Operations, by William Seaman Bainbridge, M. D., of New York. Reprinted from Annals of Surgery.

The Effects of Goitre Operations Upon Mentality, by William Seaman Bainbridge, M. D., New York City. Reprinted from American Medicine.

The Present Status of the Surgery of Systemic Goitre—Illustrative Cases, by William Seaman Bainbridge, M. D., New York City. Reprinted from The Journal of the Michigan State Medical Society.

Abstracts of the Leading articles of the month.

How To Fit Glasses.—By Dr. T. J. Dimitry, Chief of Clinic, Ophthalmological New Orleans, La. N. C. Med. & Surg. Journal Department, Charity Hospital, New Orleans, La., N. O. Med. & Surg. Journal, September.

In an article, that resolves itself in a plea for the more careful attention by the general medical profession, to the correction of the simple errors of refraction, Dr. Dimitry reviews the elementary requisites and points out the simplicity with which much may be accomplished.

In reviewing the laws governing luminous and illuminating bodies, attention is called to such facts as bare upon the proper correction of opticle errors. For instance, luminous and illuminating bodies give off divergent rays, such rays are parallel at 2 feet, which is considered infinite distance.

The angle of incident equal the angle of reflection.

Rays projected through glasses with parallel surfaces, will continue in straight line if surfaces are not parallel rays are bent.

Refraction is the bending of light.

A prism refracts light towards its base.

A cylinder refracts most at right angles to its axis.

Lenses are sections from spheres are cylinders, they are convex or plus and concave are minus. Convex lens converge, concave diverge rays of light.

Focus of convex lens is a real, i.e., rays brought to a point. Concave lens gives a virtual focus, i.e., focus being situated from where rays appear to come.

Spherical lenses refract equally in all directions, cylindrical lens do not. Spherical lens correct defects that are equally faulty in all meridians, cylindrical lens correct where meridian has a greater curvature than the other.

Strength of lens determined by placing a plus lens against a minus lens of same dioptric value—when lens is neutralized, i.e., plain glass obtained.

Lenses refract in decimal parts of a unit of measurement called a diopter.

One diopter lens (the unit lens) has a focal distance of 40 ins. i.e. the focus for parallel rays is situated 40 ins. from the lens.

To determine focal distance of a given lens divide number given into 40 i.e. a four diopter lens has a 10ins. focal distance.

To determine whether a lens is concave are convex, look at a horizontal line through the lens, and move the lens up and down, if the line moves in the same direction as the lens it is concave, if in an opposite direction it is convex.

In a cylindrical lens the line moves with it or against it at right angles to its axis, depending upon the convexity of the concavity of the cylinder.

Dr. Dimitry reviews the anatomy of the eye, emphasizing the causes of astigmatism myopia, hypermetropia and presbyopia.

Astigmatism—Curvature varies in meridians of the cornea.

Myopia—Too great a convexity of the cornea, image produced in front of the retina.

Hypermetropia—Cornea not convex enough, image produced behind the retina.

Presbyopia—A physiological phenomenon occurring in old age. A diminution of the power of accommodation due to changes in the crystalline lens power to change curvature to same extent as in youth loss.

To correct astigmatism use cylindrical lens, here Dr. Dimitry advises the ophthalmologist to handle the case.

To correct myopia, use a concave lens, for hypermetropia a convex lens.

In correcting myopia attention is called

to its cause i. e. too great dioptric power of the lens or cornea or anterior-posterior diameter of the eye too long. As the minus lens disperses light, by its use the focus, which is too far in front may be thrown further back upon the retina.

In hypermetropia convex lens are used for correction, as they converge rays bringing the focus forward from behind to upon the retina.

Dr. Dimitry advises putting the eye under atropin to correct such errors of refracti particularly in hypermetropia, where the exact measurement is desired, for if the accommodation is not paralyzed the ciliary muscle will make an effort to correct error of refraction.

Atropin as a cyclopegic paralyzes accommodation and dilates the pupil.

The armamentorium to fit glasses consists of Trial Cases and Test Cards.

Trial cases consist of lenses, a few prisms, opaque discs and a trial frame. These lenses refract in decimal parts of a unit of measurement i.e. a dioptry.

Test cards consists of letters of different sizes, which should be seen at different distances. At 20 feet each letter embraces an angle of five minutes on the retina. The rows of letters are arranged in sizes to be seen at 200, 100, 70, 50, 40, 30, 20, 15, 10, feet.

Each eye should be tested with the other eye closed.

Normal vision is expressed as 20 xx i.e. the eye under atropine sees the line on the test card marked 20 feet. If the eye can see only the line opposite 200, the vision is expressed as being 20 cc., etc.

The test card is placed at twenty feet from the eye, as this is infinite distance.

In correcting presbyopia, the method of Holtz may be used, which is 40 years of age plus 0.75 diopter sphere (D. Sph.) 45—plus 1.50 D. Sph.; 50—2.00 D. Sph. 55 11-22 2.50 D. Sph.; 60—3.00 D. Sph.; 65—3.25 D. Sph.; 70—3.50 D. Sph.; 75—3.50 D. Sph.; 80—3.50 Sph.

If patient is over 40 years old correct error of refraction and then add for presbyopia. Bifocal Lenses are used to correct, first, the top glass for the error of refraction and the lower segment, which fits in, for the presbyopia.

In prescribing for glasses the following example is given:—

Right eye (R. E.) or oculus dextra (O.D.) 2.00 D. Sph.

Left eye (L.E.) or oculus sinistra (O. S.) 1.25 D. Sph.

Sig. for Constant use

Dr. MAHY

Auria Due to Unilateral Calculous Obstruction.—Dr. Louis Frank, of Louisville, Kentucky, restricted his contribution before the recent meeting of the Southern Surgical and Gynaecological Association to a consideration of anuria due to calculous obstruction above the bladder, and it was further limited to those of a unilateral type. It had been his fortune to have observed five cases of total anuria in which the causative factor was calculous disease of one kidney only, and it was this type with which the paper was concerned.

In his five cases the first, although seen by three most excellent practitioners, was not suspected as being due to calculus, notwithstanding the history, until he saw the patient on the fourth day after anuria developed. Case two was treated for a week by one physician, and, the second being called on account of the absence of the first from the city, led to the diagnosis. Case four was treated by a young practitioner for four days for stomach trouble without a diagnosis having been made, but which was later made by a gentleman who had knowledge of case one.

The author quoted Watson to the causes, as (1) the blocking of the ureter of one kidney, the other being functionally incapable; (2) the blocking of the ureter of a fused kidney or the common stem of a fused ureter, two kidneys being present; (3) the blocking of the ureter of one kidney and the lessening of the function of the other by reflex influence, the latter organ being normal or but moderately diseased. It was the belief of Watson that in the majority of cases of unilateral calculous anuria the unobstructed kidney was either destroyed, functionally useless or congenitally absent.

What was the cause of this essential or true anuria? In some experiments with reference to the results of ligation of one ureter, which the author reported to the Association at its Washington meeting, the following observations were made: That a kidney might resume work even after six to eight weeks of obstruction of its ureter; that for a period of from two to five days, sometimes longer, after ligation (obstruction,) the surrounding tissues were edematous, the veins enlarged; that after removal of the obstruction the urine filtered through the kidneys very rapidly, (polyuria;) that the unobstructed kidney became primarily congested, arterial then venous, and very quickly hypertrophied.

These observations were confirmed clinically in the cases of calculous obstruction, and seemed to explain certain symptoms and probably in certain instances failure of the unobstructed kidney to functionate. Likewise, the anuria occasionally following nephrectomy might, in the absence of a mechanical obstruction find its explanation in the same causes.

After detailing reports of five cases, the author stated that a study of these at once made evident the marked difference in many essential respects, as Morris had shown between calculous anuria and the suppression of urine produced from other causes. Attention was called to the very distinct tolerant stage which these patients had, and which might persist for a number of days, varying from two to twelve or fourteen. There was no definite time which might elapse before the tolerant stage ceased and the final uremic stage began. In the author's first case this stage might have begun on the morning of the operation as indicated by the slight rise in the blood-pressure and the mental discomfort which the patient began to have. The duration of the uremic stage was also variable, as certainly in the child (Case 5) although it had no convulsions, its unconsciousness might have been of uremic origin. This unconsciousness lasted for three days during which time no convulsions nor other evidences of toxic poisoning were manifest.

As indicated by the history, the anuria as a rule began suddenly. It should be remembered, however, that there might be periods of polyuria with recurrence of total suppression indicating that probably the stone had shifted or probably some temporary alteration of blood-pressure had occurred in the good kidney. In Case 1, the attack began following exercise and the symptoms which existed during the three or four days preceding the suppression might be assumed to be symptomatic of the impending total anuria. This patient complained of no colic at the time of onset of the symptoms, and it is only when the intrapelvic pressure in the kidney became great that he began to complain of aching in the obstructed kidney.

The fact had been noted in all of the author's cases, and this was also borne out in the experimental work previously referred to, that the compensatory work of the unobstructed kidney was always attended with a decided increase in its size. The author had also made this ob-

servation in experimental unilateral nephrectomies, and had found in such nephrectomies, as in ligations or obstruction of the single ureter, that the enlargement of the kidney was permanent, and that organ became hypertrophied.

Case 2 bore out the observation of many previous observers and would seem to lend much weight to the statement made by Morris that "The most important clinical feature in cases of calculous anuria was the fact that it denoted the patient possessed only one functionally active kidney, the other being absent or destroyed by previous disease." While the author did not agree with this dictum, still if he had borne this in mind the result in Case 2 might have been different. Undoubtedly this patient, as shown by the autopsy, must have had probably a previous temporary partial obstruction in his ureter. This was the only explanation for the tremendously dilated ureter, and it would also serve to account for the right-sided pyelonephritis which was evidently an old disease.

In discussing the symptoms of calculous anuria, it seemed to the author that probably the most important feature in connection with anuria of this kind was the absolute absence of any disturbance in these individuals aside from lack of urinary secretion.

The realization of the possibility of the causation of the anuria should lead at once to a thorough cystoscopic and radiographic examination. If this was impossible for any reason and even if such examination should be negative, with a clear history and a fair presumption as to the cause of the obstruction, operative interference was urgently and immediately indicated. The fortunate outcome in Case 5 was certainly no argument in favor of postponement of operation. It might, however, be well after the stone had been located by the X-ray, or even if such cause of destruction had not been clearly detected, to attempt the passage of the ureteral catheter. It might be impossible, as in Case 4, to introduce the catheter beyond an obstruction due to such invagination, but the fortunate relief of the anuria in Case 3 would indicate that this method of relieving the patient might be tried.

Treatment should be promptly instituted in these cases. The mortality by non-operative or expectant means was very high, ranging from seventy to eighty per cent., whereas in the cases which had been treated surgically, the mortality was only half as great, varying from

forty to forty-five per cent. With earlier recognition and prompt surgical intervention, the author felt sure the mortality would be even less. Even late operation had at times been successful.

The nature of the operation to be performed was in some respects a matter of choice. Speed and expeditiousness were quite necessary. The obstructed kidney must either be nephrotomized or pelvotomy should be done. Personally, the author preferred opening the kidney pelvis if this could be done quickly, as the object to be attained, namely, the relief of intrapelvic pressure on the blood vessels, was just as thoroughly and permanently overcome in this way as by section of the kidney. There were also some dangers from hemorrhage both primary and secondary, from nephrotomy which must not be ignored and which one did not consider in opening the kidney pelvis. Hence the latter operation was equally efficient in securing the desired results and was far less dangerous.

Miscellaneous.

Before and After Childbirth.

Childbirth is always attended by more or less danger and discomfort. Too often the extra burden a prospective mother has to bear overtaxes her nutrition and strength.

The mother who nurses her baby also frequently has to have supportive treatment to enable her to meet the demand placed on her bodily metabolism by the needs of her growing offspring. At such times of stress effective tonic treatment is always required and clinical experience has clearly shown that no remedy is so serviceable from every standpoint as Gray's Glycerine Tonic Comp.

Used throughout the later months of pregnancy and during the puerperium, it gives to the mother the exact stimulus and support needed not only to carry her through a tryn period but to fit her for the still more exacting one of lactation.

Free from contraindication, it is the one remedy that the practitioner can employ before and after perturbation with absolute certainty that its effects will never be harmful but invariably beneficial and helpful.

Concerning Cathartics.

To the layman, a cathartic is simply a cathartic and nothing more. One thing

is as good as another, as long as it "moves the bowels." To the physician there is a vast difference between "moving the bowels" and inducing normal bowel action.

For years Strychnine was the stock ingredient of cathartics for the purpose of stimulating the muscle to peristalsis. But nowadays we realize that Strychnine more often inhibits peristalsis by overstimulation, and that the best stimulant of intestinal muscles is the intestinal secretions.

Pil. Cascara Comp. Robins contains no Strychnine to force the musculature, nor Belladonna to inhibit the secretions. On the contrary, it stimulates the flow of secretions and normalizes peristalsis. It is, in fact, a Normal Cathartic.

The absence of narcotics in a cough preparation is bound to appeal to many physicians who would much prefer a safe and efficient sedative and expectorant to one containing narcotics. Mentholated Expectorant, Lilly, contains lobelia, ipecac, sanguinaria, ammonium chloride, menthol and syrup tolu, a combination of marked value in the early stages of bronchitis, tracheitis and laryngitis. The proportions are carefully adjusted to give the greatest degree of efficiency without producing any untoward effects. The total absence of narcotics is the significant feature and one which makes the preparation of wide application. Mentholated Expectorant, Lilly, may be safely given to children, adults and the aged and it does not tend to constipate and lock up the secretions. It is supplied through the drug trade. Address Eli Lilly & Company, Indianapolis, for samples and further information.

Doctor, are you among the many successful practitioners who have adopted Urisal in their daily work?

It is the ideal treatment for the many ailments for which you desire intestinal elimination either as a gentle laxative or an active Carthartic you will find no better remedy than Urisal. The busy practitioner has ever found it an ally worthy of confidence as it never disappoints. It is prompt and positive in action and agreeable to the taste. It is especially adopted for relieving the conditions, arising from indiscretion in eating and drinking.

Pituitary Extract in Obstetrical Practice.

Physicians who are employing pituitary extract in cases of delayed parturition will be interested in this excerpt from an

announcement by Parke, Davis & Co., which appears in the December issue of a contemporary:

"The clinical indications for Pituitrin are such as to demand that it be of high activity. It is equally important that it be uniform in strength. Owing to unavoidable variations in the fresh glandular tissue, the amount of gland substance represented in a preparation is not an accurate index of its strength. Uniformity in therapeutic activity can be obtained only by rigid assay.

"Because of its importance in obstetrical practice we have given much attention to a determination of the proper strength and standardization of Pituitrin. The result of our investigations is a product of high potency, representing the average activity of 0.2 gramme of fresh posterior pituitary lobe to each c.c. of the solution. As an oxytocic Pituitrin stands without a rival. There is no more active pituitary extract.

"Pituitrin, P. D. & Co., is standardized by the two accepted methods of determining pituitary activity; the blood-pressure test and the oxytocic test, the latter by use of the isolated uterus. Every lot of Pituitrin represents the same high degree of activity."

Administered during the second stage of parturition (it should not be given during the first stage), Pituitrin is said to convert a case of tedious inertia into one of normal rhythmic labor, saving time, preventing suffering, and diminishing the risk to the child which attends upon protracted labor. It is supplied in glaseptic ampoules of 1 c. c. and $\frac{1}{2}$ c. c. capacity, convenient for hypodermic injection.

As its name indicates, Pyroferrine, Lilly, is a preparation of iron, in combination with phosphoric acid and strychnine. It is non-astringent, almost tasteless and has a wide range of usefulness. It is especially indicated in puerperal and general anemia. Pyroferrine promotes the appetite, improves digestion, increases the number of red corpuscles and is of great value wherever the blood is impoverished from any cause. There is no product of its kind on the market superior to Pyroferrine, Lilly. Write Eli Lilly & Company at Indianapolis for further information or ask your local druggist.

Chloroform Manifestations in Poliomyelitis.

At the recent French Congress of Pediatricists Netter and Ribadeau-Dumas reported the case of a six-months-old infant who presented the following mani-

festations of poliomyelitis: Paralysis of both legs, one arm, and the upper part of the other arm; nystagmus, choreic movements of the facial muscles, and protrusion of the tongue. Lumbar puncture showed a lymphocytosis. The infant died in the course of a complicating broncho-pneumonia. Autopsy showed the characteristic lesions of poliomyelitis. Choreiform movements are frequently observed in the course of experimental poliomyelitis in the monkey, but are exceptional in the human cases.—*La Presse Medicale*.

Contemplation of the Back of One's Neck.

Plus the lessons learned therefrom, otherwise this writing would be totally valueless. Other men have had carbuncles, but have learned nothing; but this particular one on the back of my own neck has been the means of impressing much valuable information, both upon what to do and what not to do. As the Arab proverb says, "I am what I am, and what I have experienced I know" (or have lived.) In the first place, freezing with ethyl chloride is a common method of producing anesthesia for the crucial incision and curettage. It is an intensely disagreeable process; it does relieve the pain of the cutting; it is painful in the thawing out, and the effect of the actual incision through the frozen tissue is exactly the same as a whack from a policeman's club upon the back of the neck. One for each line of the incision. Take it all in all, with the feeling of contraction exerted upon very sore and swollen tissues during the freezing, and the stinging and smarting during the thawing, it certainly is not a pronounced success as an anesthetic.

If one wishes to use freezing as a means of producing local anesthesia, the tingling of the thawing which ensues may be avoided by painting the wound with Agnews or Shuford's pile solution. These are analgesic, germicidal, and act for a length of time which may be reckoned in seconds. Ethyl chloride or freezing mixtures are properly used to render a very small area insensible; into this a hypodermic needle should be introduced by, or with, a rotary motion, and the infiltration of small successive areas with novocain or stovain may be readily performed. Nor need one fear overdosage, because the crucial incision makes an outlet which is enlarged by the curettage, and the escaping blood washes the injected anesthetic away before complete absorption takes place. This method

does require an additional ten minutes, but the blissful relief to the patient is worth it. Having experienced both ways, it is quite natural that the better one, from the patient's standpoint, should be selected, especially as this is written before a sharp experience has lost its acute edge.—Editorial in *The American Practitioner*.

Convalescence.

After a long and serious illness the functional activity of the digestive tract is always depressed and as a consequence, during convalescence no line of treatment is more urgently required or more positive in its benefits than measures capable of promoting the physiologic efficiency of the digestive organs. Tonics are more or less serviceable, but inasmuch as the profession have in Seng a true digestive secerment, this remedy is the one generally turned to by physicians who are familiar with its exceptional therapeutic value. Under its systematic use the secretory glands of the stomach are gradually restored to their normal activity, and as this takes place, the nutrition of the whole body naturally shows a corresponding improvement. Since convalescence and a return to perfect health are always largely dependent on the restoration of the nutritional equilibrium, it can readily be seen how useful Seng is following an acute illness. Certainly no medical man who has ever tried this effective remedy in the treatment of some weak debilitated patient and observed the response which the digestive functions make to its tonic influence, will deny to similar patients the benefits he knows it will give.

Nervousness.

As to the drugs to be given in nervousness, there is only one class which has a specific influence in controlling nervous excitability. This is the bromides, and it has been found that a mixture of several of them is better than one alone. For this reason many physicians prefer Peacock's Bromides, which is a splendidly balanced mixture and which even on prolonged use gives rise to little or no gastric disturbance. The dose must be regulated according to the state of the patient, but when judiciously given there is never any difficulty of controlling even the more severe cases of nervousness. In the more severe forms of neurasthenia, complete rest in bed with small doses of Peacock's Bromides is usually more effective than any other treatment. In epilepsy, which is also a disease in which the

The Remedy of Choice in Cardiac Affections.

It is interesting to note the growing interest medical men are taking in Cactina Pillets as a safe and dependable cardiac tonic. This is not surprising; indeed the only surprising feature is that the efficiency of this remedy has not been more generally realized. Hardly any one drug with the possible exception of digitalis, has a broader field of activity, and there are many competent observers who place it first among cardiac remedies. Experience has shown that the most conspicuous influence of Cactina upon the heart is its effect on the local nutrition and consequent increase of the muscular-motor energy. Certainly it is the heart tonic par excellence, since it increases heart action and restores nerve function with a promptness that is rarely observed with any other remedy.

Made from a dependable preparation of Mexican *Cereus Grandiflorus*, Cactina Pillets are especially effective in functional disorders of the heart associated with feeble, irregular pulse, more or less dyspnea and a sense of chest oppression. In such cases the effect of Cactina Pillets is exceedingly gratifying, the heart being promptly steadied and strengthened, and dyspnea markedly relieved. Tachycardia and palpitation are quickly controlled, and the precordial sensations which cause so much apprehension are soon dispelled.

In accomplishing the foregoing, the physician does not have to apprehend toxic or untoward effects, for Cactina Pillets are not only non-cumulative but totally devoid of all unpleasant or disagreeable action. It is hardly to be wondered at, therefore, that careful, painstaking physicians are not only using Cactina Pillets more extensively than ever, but are gradually coming to look upon this preparation of cactus as the remedy of choice in functional affections of the heart.

The Various Maladies resulting from more or less tardy alimentary conditions can be promptly and thoroughly relieved by the judicious use of Pil. Cascara Comp. Robins. Made in two strengths, Mild, 1 gr., Strong, 4 grs., you can easily regu-

late dose to suit each patient. For this purpose these pills are par excellence the remedy.

THE END OF A GREAT CAREER.

He had often been in battle and escaped without a scratch;
He had met stampeded cattle and been much more than their match;
He had roughed it in Alaska, and escaped without a bruise
When a cyclone in Nebraska blew the laces from his shoes.

He had been a reckless rover and had lived in many lands;
He had driven camels over the great Sahara's burning sands;
He had been a deep-sea diver—not because he liked it, though—
He had also started five or six revolts in Mexico.

He had been a Texas ranger and a daring army scout;
He had been through every danger you have ever read about;
He had been an aviator and a reckless steeplejack;
From the poles to the equator he had traveled and come back.

He could almost freeze one's marrow when he had the wish to try;
His escape was mighty narrow when he was a Russian spy,
But he'll wade no more through slaughter, for he shed his mortal coil
When he drank a glass of water that his wife forgot to boil.

—Chicago Record-Herald.

Lead Poisoning From Industrial and Medical Points of View.—Oliver (Clinical Journal of London) says that the treatment of industrial lead poisoning is both preventive and curative. The abolition of female labor in white-lead works, is now admitted to have been one of the best things for employers, as well as for employed. One of the main things in connection with lead works is not to give employment to any person who is believed to be susceptible to the poison. It is not always easy to differentiate in this respect between persons who are susceptible and those who are not, but it is a wise precaution that no man should be given work at a factory without previously having undergone a medical examination. At one of the lead factories in Newcastle-on-Tyne Irvine examines all fresh

applicants for work, as well as men who had given up the work and are applying for re-employment. The previous occupation is inquired into, the teeth and gums are examined, the urine is tested, and the blood-pressure is taken. A blood-pressure above 140 mm. of mercury is a disqualification for work; so, too, albuminuria, anemia, and alcoholism. Repeated medical inspection of the work-people at short intervals, with power to suspend in case of necessity, attention to details of personal hygiene on the part of the workers, also the introduction by the employers of hoods and exhausts to remove dust at the places where dust is created, have done much to reduce the number of cases of industrial lead poisoning. The last regulations for lead works were issued in 1908. On Tyneside, during the few years previous to 1908, there were on an average fifty-five cases of lead poisoning notified to the Home Office every year, but since then the average is six. A few years ago risks in lead works had become so great that insurance companies would not accept offers; now the various companies compete with each other to secure their patronage. The writer does not deal with the medicinal treatment of lead poisoning, for he wishes to draw attention to a line of treatment which is both preventive and curative.

Some time ago one of the writer's laboratory animals, having become paralyzed in its forefeet through having taken lead, it seemed to the writer that if he could remove the lead from its body he should get the animal well again. Electricity suggested itself, and as Clague, of Messrs. Mawson & Proctor, chemists, Newcastle-on-Tyne, had had some successful experiments of the introduction of medicines into the system by electrical methods, or what is known as ionic medication, the writer asked him to devise a means whereby lead might be removed from the body. He suggested a double electrical bath. This was tried, with the result that the paralysis disappeared, and the animal recovered. Lead was found in the bath water and on the negative pole. Other experiments were repeated, with the same result, leaving no doubt as to the removal of lead from the living body.

The theory of the treatment is simple enough. Metallic compounds are readily split up into their components by means of electricity, and in this disruption the metal or ion goes to one pole, viz., the negative, while the acid radicle goes to the positive. When, therefore, a workman has his feet immersed in a bath in

which the positive electrode has been placed and his hands and forearms are immersed in another bath in which the negative electrode has been placed, and a current of 15 volts and 30-40 milliamperes is allowed to pass for half an hour, lead in minute quantity may be found on the negative electrode and in the arm-bath water. If one takes a U-shaped glass tube and, after having filed it with water containing a small quantity of common salt, places a piece of skin tightly over each mouth of the tube and then inverts it, placing one limb in a dish containing water with lead dissolved in it and the other limb in a dish containing only water, and allows the tube to stand thus for hours, no change occurs. The water remains in each bath practically as it was before the experiment. If, however, the positive pole of an electrical battery is immersed in the dish of water containing lead and the negative pole is placed in the dish of water containing water only, the passage of an electrical current is followed by the lead being actually transferred from the bath which contains it through the U-tube into the water previously free from lead.

Salvarsan And Neosalvarsan in The Treatment of Hereditary Syphilis.

Bunch (The British Journal of Children's Diseases) has not records of a sufficient number of cases of syphilis, chiefly virulent syphilis, in which it has been necessary to give six, seven, or eight injections of neosalvarsan, on which to base conclusions, but there is no reason to think that the drug produces any anaphylaxis, or that moderate doses may not be repeated seven or eight times when the syphilitic lesions prove resistant. It has yet to be determined how far the first or second dose causes any immunity to the action of the drug. In babies, however, it is rare to need more than two or three injections of neosalvarsan, and, after the first or second intravenous injection, the writer is rather in favor—if more is needed—of an intramuscular injection, since the arsenic is then so much more slowly eliminated, the additional store can be gradually drawn upon over a considerable period, and its beneficial effects gradually produced.

The Wassermann reaction is but of little use as a guide to the treatment of hereditary syphilis. In almost all cases of hereditary syphilis with active symptoms it is positive, and usually remains positive in spite of treatment while such active symptoms are present. In a large

percentage of cases of late hereditary syphilis it is also positive. This test conclusively shows that the truth of Colles's law—that a syphilitic child procreated by a syphilitic father never infects the mother—depends on the fact that the mother is already infected. This infection is in most cases the so-called conceptional syphilis.

In conclusion, as to the important question, under what circumstances salvarsan or neosalvarsan should be employed in the treatment of hereditary syphilis, the writer's view is that the drug should be used in those cases in which rapidity of action is of prime importance. When the child is so ill that there seems little chance of it surviving, when mercury has already been tried and the child seems to be still sinking, or when mercury has proved inefficient after continued use, the writer has no hesitation in injecting neosalvarsan. That some cases of syphilis prove absolutely resistant to mercury we, of course, all know, and it is quite wonderful to see how often these cases clear up under treatment with neosalvarsan. Without wishing to claim that the drug is an infallible cure for hereditary syphilis, the writer will only say that for rapidity of action and power of healing up syphilitic symptoms nothing superior has up to the present time been discovered.

Intramuscular Injections of Antitoxin in The Treatment of Diphtheria.—Rolleston and Macleod (British Journal of Children's Diseases) reach these conclusions:

Intramuscular injection, preferably in the vastus externus, deserves to supersede all other methods of administration of antitoxin in the treatment of diphtheria for the following reasons:

1. It is quite as simple as the subcutaneous method, insures much more rapid absorption, is less painful, and less liable to give rise to abscesses at the injection site.

2. It is superior to the intravenous method, not only in the great simplicity of its technique, but also in the less rapid excretion of antitoxin after injection.

3. The more absorption of antitoxin by the intramuscular route is shown, not by the effect on the faucian or laryngeal process, but by the lesser incident of paralysis especially of a severe kind.

Mixed Infections in Pulmonary Tuberculosis, And Some General Observations

Respiratory Diseases

can be promptly relieved of their principal dangers—embarrassment of the heart's action and general systemic depression—by the administration of

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on Treatment With Tuberculin.—Bardswells (Bristol Medico-Chirurgical Journal) experience is that tuberculin is not a remedial agent which can be depended upon to revolutionize either our sanatorium results or our conception of the outlook for the average consumptive. Tuberculin has not proved itself to be a remedy in the ordinary sense of the term, and no immediate or striking results are to be expected from it, even in the most favorable cases.

Tuberculin, as employed in a sanatorium, in association with the favorable conditions which are secured by residence in the institution, exercises an influence on those cases in which steadily increasing doses can be taken. The treatment produces (1) tolerance to considerable doses of tuberculin, and in many cases (2) an effect on the diseased structures. This local effect may be a source of danger.

As to the kind of cases in which it may be expected that tuberculin treatment is at least without unfavorable effect, the writer's experience is that it is the patient with a good outlook who has rapidly responded to general hygienic measures, and who has shown evidence of constitutional vigor and recuperative power.

In a considerable number of cases tuberculin, so far as can be judged from immediate clinical results, has no obvious influence on the lesions. The patient is gradually made tolerant to it, but this seems to be the only objective indication to its effect. Whether this tolerance is of value is a point which has yet to be established.

Further, in a proportion of cases tuberculin is not merely inert, it is definitely prejudicial.

As far as the Midhurst results shows, tuberculin cannot be looked upon as a means whereby an unfavorable case can be converted into a favorable one, or as likely to turn the scale in the patient's favor when his progress is doubtful, and certainly not when it is definitely retrogressive. More often than not in such cases it will do harm.

The writer's experience shows that the administration of tuberculin is quite unsuitable as a routine method of treatment of pulmonary tuberculosis, and that its indiscriminate and careless use on a large scale can only end in harm.

A Note of Sixty-Three Successive Cases of Enteric Fever Treated With Vaccines.—MacArthur (British Medical Journal) says that the results in the cases under treatment early were most striking. There is no doubt that the disease was rendered definitely milder, and most of the patients progressively improved from their first or second injection. Three showed a constant and progressive fall of temperature after each injection, but this marked sequence was not a usual feature. The most striking point was the absence of symptoms other than the pyrexia; the headache, and the patients felt well and slept well; they did not look ill. In the words of one Mauritius practitioner, "My vaccinated enterics give me no anxiety."

From such small numbers it cannot be said that the disease was distinctly cut short although there seemed to be clinical evidence of this in several instances; certainly the period of convalescence was markedly shortened owing to the mildness of the course and the

freedom from distressing symptoms and complications.

These remarks apply especially to the "favorable" group; the advantages of vaccine treatment in the late cases were much less marked, and sometimes there was no appreciable benefit whatever. In spite of the small actual numbers, the distribution of deaths, complications, and relapses in the 11 late cases and the 52 others respectively is significant. In no case did the treatment cause any appreciable ill effects.

The dosage varied with the age and condition of the patient, but for well-built adults the initial dose was usually from 150 million to 300 million. Increasing doses were given at two or three days' interval. In two cases only was the dosage controlled by opsonic observations. The largest dose given to any patient in this series was 1500 million.

Of the 63 cases of enteric fever, seven were treated in the military hospitals, and the writer is indebted to superior authority for permission to include these; his thanks are due to several Mauritius practitioners for permission to include the remaining 56. These latter were regarded largely in the nature of test cases, and were discussed from time to time at the meetings of the medical society. The results obtained were considered so satisfactory that vaccine therapy is being adopted in the civil hospitals, and generally throughout Mauritius, as routine treatment for enteric fever.

A smaller series of paratyphoid fevers was treated during the same period on similar lines; with one exception all these cases ran a mild, course, and there were no deaths.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an

action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature. show that every physician should see that his patient gets exactly what he prescribed, No "just as good" allowed.

Practising Without Authority—Sufficiency of Information.

'Texas Penal Code, provides that it shall be unlawful for any one to practice medicine who has not registered in the district clerk's office of the county in which he resides his authority for so practising, together with his age, post-office address, place of birth, and school of practice to which he professes to belong, subscribed and verified by oath. An information for practising without complying therewith was held to be fatally defective because it failed to allege the defendant's residence and that he had not registered his authority or license in the district clerk's office of the county of his residence, though it alleged that he was not licensed and authorized under the laws of the State to practice medicine, was not practising medicine under the provisions of the laws of the State, and was not a physician under a diploma of a reputable and legal college of medicine.

Hypothetical Questions—Causes of Pain at a Particular Place.

A workman fell into a pit about 18 inches deep on his employer's premises. An expert witness for the plaintiff was asked what in his opinion of the examination of the plaintiff caused the pain at the point of fracture of the tenth rib. This question was allowed over objection by the defendant, and he answered that he thought the pain and tenderness were caused by adhesions below the rib on the inside of the chest bone, and that he had been unable to discover any disease of the spinal cord. He was also asked to what he attributed the pain that was evidenced at the point of fracture. He answered, over objection, that he attributed it either to the old inflammation of the pleura, and to the involvement of the intercostal nerve at that point, or to the bone formation or the adhesions and old scar tissue formed from the pleurisy in the pleura. It was held that the witness was properly permitted to give his opinion, from his examination, as to the cause of pain at a particular place.

The Recovery From Typhoid.

In spite of the improvements in general

In Goitre

— and thyroid derangements in general—
there is no remedy so uniformly effective as
iodine, especially when administered in the
form of

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sanitation, typhoid fever still continues to exist, and is especially prevalent during the fall and early winter months. It is more than probable that most cases occurring in the larger cities are the results of infections contracted at the summer vacation resorts, where the water and food supplies are not as carefully safe-guarded as in urban communities. Although many forms of treatment, designed to abort or cut the disease, have been advocated from time to time, it is indeed doubtful whether such regulation of the infection has ever been accomplished. As the average course of Typhoid is from four to six weeks, it is scarcely to be wondered at that the patient usually emerges from the attack in a generally devitalized condition. This is accounted for not only by the general toxemia incident to the bacillary infection, but also because the practically exclusive milk diet generally adopted deprives the patient of the natural food iron which ordinarily maintains the ferric sufficiency of the blood. Some degree of anemia is therefore almost always in evidence when convalescence is first established. The quickest and safest way to overcome this blood deficiency and to hasten revitalization and a return to the normal, is to give Pepto-Mangan (Gude) regularly and in full dosage. This

thoroughly agreeable and acceptable hematic tonic is particularly serviceable in typhoid convalescence, because it does not irritate or disturb the digestion, nor induce constipation.

Isolation and Quarantine Periods in the More Common Infectious Diseases.

The normal minimum isolation recommended for this disease is six weeks—a period which may be either much too short or unnecessarily long, according to the condition of the individual case. The question of detention resolves itself into the question, is desquamation infectious? a fact by no means proven. Priestley discharged from the hospital 120 desquamating children without causing a single secondary case. Others have adopted four instead of six weeks as the minimum period of detention in the hospital without increasing the return case rate. Ker believes that the adoption of five instead of six weeks as the minimum period of isolation would be a great step in advance. He considers seven days an ample period of quarantine for contacts.

Diphtheria.—Patients should be isolated until the necessary negative cultures have been obtained. Quarantine is unnecessary for perfectly well contacts who have given two successive cultures within three or four days.

Measles.—The usual isolation period for measles is two weeks from the appearance of the rash. In hospital outbreaks, however, measles patients are regarded as free from infection as soon as the rash has disappeared. The quarantine period of measles in hospital outbreaks is fifteen days; eight days may be regarded as a minimum, and nine or ten days more frequently from the probable moment of infection to the occurrence of the first symptom, and from thirteen to fifteen days to the appearance of the rash. Eberstaller at Graz allows contacts to attend school for eight days and closes the infected class from the ninth to the fourteenth day.

Ruella.—The period of detention for rubella is tendays. Netter and several other French authors, however, hold that a case is no longer infectious after the disappearance of the eruption. The incubation period is from twelve to twenty days. Contacts may safely attend school for eight or nine days after exposure and thereafter should be excluded until the twenty-first day is past.

Whooping-Cough.—Ker has the gravest doubts as to the infectivity of whooping-cough when the paroxysmal stage

has fully developed, and considers that, in favorable circumstances and with otherwise healthy children, isolation is unnecessary after the paroxysmal stage has lasted for a week or ten days.

Chicken-Pox.—Ker believes a patient to be infectious until the last crust has separated. As regards quarantine, contacts are allowed to mix with other children up to the eleventh day, when they are isolated until the twenty-second. School attendance can safely be allowed for ten days from the first exposure, and be resumed after three weeks from the last contact with the patient.

Mumps.—The usual isolation period for mumps is three weeks, but Ker has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of swelling. Exclusion of contacts from the thirteenth to the twenty-sixth day from the date of the first and last exposure respectively would be a safe rule for schools to adopt.—Edinburgh Medical Journal.

Traumatic Spondylitis.

In 1891 Kummel applied this name to what he regarded as a definite clinical entity. The role of traumatism was apparently clearly established in the five cases that he reported. Three distinct stages of the disease were delineated: the first corresponding to the few days following the traumatism and characterized by the presence of pain in the region of the original injury; the second marked by apparent well-being; and the third distinguished by the development of a kyphosis and the onset of radiating pains. This condition was attributed to a rarefying osteitis involving the bodies of one or more vertebrae and resulting in a deformity.

Nicola Caprioli (*Giornale Internazionale delle Scienze Mediche*, September 15, 1914) reviews a series of fifty-four cases of this condition which have been reported in the literature, including two of his own, and comes to the conclusion that there is sufficient evidence to substantiate the original claims of Kummel about which considerable controversy has arisen. Many have been the theories advanced to explain the clinical and pathological phenomena in so-called Kummel's disease: Helle suggesting vasometer disturbances; Goltz and Kroening citing an experimental osteoporosis of the vertebral bodies secondary to trophoneuratic changes in the adjacent spinal cord; Virchow and Recklinghausen advancing the

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hypothesis of an osteomalacia or rarefying osteitis of the spine; Mikulicz pointing out the possible role of an intra- or extradural hematoma; Schede, Kirmisson, and others believing in the existence of an actual fracture of the vertebral column without mobility of the fragments but with a slow attrition of the latter; and finally Oherst including all cases of traumatic spondylitis within the broad classification of tuberculosis of the spinal column.

Comparatively few cases of this condition have come to autopsy. Examination of all the clinical histories reported indicates that little has been added to the original picture portrayed by Kummel, the chief features of which are as follows: Sequent to a direct or an indirect injury to the spinal column, the patient complains of pains which may last from a week to several month sand which may or may not be accompanied by symptoms of spinal commotion, such as motor or sensory disturbances in the legs, sphincteric impairment, etc. Little by little all symp-

toms disappear and the patient feels perfectly well. This stage of apparent health lasts for a period varying from several months to several years after which the patient again begins to experience pains radiating from the site of the original injury into the hips and legs. At the same time there appears the vertebral deformity which is usually a kyphosis, though sometimes a scoliosis or kyphoscoliosis, slowly and progressively increasing unless arrested by suitable orthopedic treatment. In making a diagnosis of Kummel's disease there must be excluded Pott's disease, acute osteomyelitis of the spine, syphilitic spondylitis, and traumatic syringomyelia. The possible aid of the X-rays should not be overlooked.

The conclusion is reached that traumatic spondylitis is the result of a direct or indirect injury of the spine followed by a rarefying osteitis of the spongy tissue of the vertebral bodies. The original traumatism may be a contusion of the bone or an actual though latent fracture.—Editorial in The Medical Record.

Union of an Almost Completely Amputated Hand.

Schlossmann reports the case of a boy, age 10 years, whose right hand was almost completely amputated by a machine, leaving a pedicle barely 3 cm. wide at the ulnar margin, containing the ulnar nerve and artery and the tendon of the flexor carpi ulnaris. The tendon of the extensor carpi ulnaris was cut only half way across. Under anaesthesia the periosteum and the divided tendons, twenty-two in all, were sutured, and the two ends of the median nerve united. The radial nerve remained divided. The radial artery did not have to be sewed, as on freeing its distal end blood was seen to come out with every heart beat, showing that the blood supply from the ulnar through the volar arch was sufficient. The skin was closed without drainage and the wound healed without reaction. On the eleventh day the splint was removed and motion begun. At the end of six months the boy was again admitted to the hospital, for removal of his appendix. The position of the hand was normal. The thumb and index finger were livid, owing to impaired circulation. Dorsal flexion was decreased one half, volar flexion one fourth. The hand could be used to eat, drink and write, and he could take up and hold large and small objects which were not too heavy. The muscles of the right arm and forearm showed lack of development.—*Clinical Journal*, London.

A Scarcity of Young Doctors in the Country.

How the dean of a medical college in Philadelphia receives requests from time to time from rural communities to send young doctors is related in *The Churchman*; but the young doctors will not go. In the last decade the number of medical colleges in the country has decreased well nigh one hundred per cent., and the number of students from 30,000 to 16,000. There are now fewer graduates in medicine, while medical standards have risen to an imposing degree. There are also fewer failures in medical practice; yet all too many, especially in the cities. A twofold evil then still remains, arising out of a lack of medical attendance in rural communities, and a decided superabundance of doctors in cities and towns. Corroborative evidence is contained in the address made by Dr. Stuart McGuire, president of the Southern Medical Association, at its annual meeting in November. Doctor McGuire emphasized one phase of the situation—the increased expenditure of time and money now requir-

ed for the development of the medical fledgling, who "is conscious of the sacrifice he has made, and usually overappreciative of the attainments he has acquired. He desires to be a specialist and will only do general practice as a means to an end. He is determined to locate in a city and unwilling to settle in the country, preferring to starve himself in the one rather than starve his ambitions in the other. This results in an urban congestion and rural depletion of medical men which has reached a point to give serious concern, and for which some remedy must be found."

The great trouble is that many matriculates coming from the country to the great civic medical schools are so attracted by the meretricious urban glamor that they conclude on graduation to establish themselves where they have studied. With no other capital than a square jaw and a sublime (and touching) faith in themselves, they determine to remain permanently, to starve if need be. During those years when men normally should marry, they lead pathetically barren lives. Life's honorable obligations they meet with difficulty, or in humiliation fail to meet. Many such men finally make good; how many are the failures after all those years one does not like to think.

In former years rural practice was hard and unremunerative; it need not be either today. One's motor car takes one quickly over good roads over great distances; among one's patients one has, much more than formerly, prosperous folk; commuters having business in the city; people who go to the country for health or recreation. The medical journals and the other literature of the day, the discussions at the county medical society are altogether adequately informing and easily keep one up to date. A few weeks of postgraduate work in cities is a positive recreation. The telephone, the parcel post, the self playing musical instruments, the trolley expresses—such factors have transformed the character of life materially and socially in country districts throughout the length and breadth of the United States. Wherefore, young colleague, unless the city has been your home, unless you have abundant capital to enable you to wait, unless you have unusual and assured prospects, you are far better off beginning your career in the country than in the big city.—Editorial in *The New York Medical Journal*.

The Surgery of War.

When a wounded soldier reaches a properly equipped hospital where he can remain, his treatment of course is the same as for civilians with similar injuries. The trouble is in getting him there. He must remain where he fell for a long time, as any attempt to aid him would result in death to the rescuer. When the battle line shifts and the zone is no longer bullet swept, relief is prompt, and sometimes long before it is safe, for the casualties among the surgeons are higher than in any other staff corps. In the meantime many of the wounded die of exposure and starvation. The survivors are necessarily in bad shape. Before injury they may have been partly or entirely starved for many days, and their bodies are covered with the dirt of days or weeks without bathing facilities. Nor is it possible to supply enough easy riding vehicles for the transportation of the wounded from the battlefield. It is evident that immediate surgical interference is entirely out of the question, even should an operating room be improvised. Indeed there is no surgeon available for the first-aid work, as they are all busy at the "collecting stations" and "ambulances," the latter term being used abroad for the movable equipment we call "field hospitals." The first helpers to reach the wounded are the stretcher bearers who are theoretically supposed to administer stimulants and render surgical first aid, but as a matter of fact they do little more than bring the injured to the "collecting station" for examination by the surgeon, whose sole duty is to patch the man up so that he can be sent to the "ambulance" or "field hospital," which is fairly well equipped for all work except operations requiring the most exquisite attention to aseptic detail. It is possible to boil the instruments after each case, but horrible as it seems, the towels must be used over and over again, for there is no time or place to launder them and no hospital can carry along enough for the hundreds of cases treated per day.

The surgery is further modified because the patient may soon be moved by rough farm carts to a larger hospital where his recovery takes place or from which he is sent to the base and thence home. The "ambulance" must be "ambulant" in fact as in name, to keep up with the army, though it is sometimes turned in a fixed hospital if the patients cannot be sent to the rear.

The development of railroads in Europe has evidently shattered all this com-

plicated system. Armies are sent by rail and the wounded return the same way. If we can read between the lines of the meagre dispatches, it seems that the medical departments are devoting all their energies towards getting the wounded on railroad cars at the earliest possible moment. Once this is done, the rest is easy, for each train has kitchen arrangements, nurses and surgeons, and the wounded suffer no more jarring than in the little trip from the car to the hospital bed. The impossibility of improvising a proper operating room and the practicability of quick transfer to a permanent hospital are thus limiting field surgery to a minimum, and a very small minimum at that; the first-aid dressing applied in the field or collecting station may be all that is required. Arteries are rarely torn nowadays, but if so, the man generally bleeds to death unless a comrade can improvise a tourniquet. In that case, a ligature and permanent dressing are applied in the collecting station or "ambulance." Abdominal surgery has no place in the battlefield, experience showing that the untreated have the most recoveries. Amputations

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have become very rare, since aseptic treatment is preserving limbs which formerly had to be sacrificed to save the soldier's life. Indeed, the fatigued and starved condition of the wounded has rendered it imperative to limit all surgical interference to the smallest necessities. Reports so far indicate that trivial injuries are proving fatal even in hospitals to an alarming extent, and of course, operation must be postponed as long as possible to permit of recuperation. The wounded soldier is a *nolle me tangere*, for modern machine-made warfare is more than the human frame can endure.

The army surgeon in the field is becoming less of an operator and more of a transportation agent and dietetist. It begins to look as though ambulant diet kitchens would do more good than operating equipments—a matter which American military surgeons have known a long time. "Field hospitals" are really to shelter and feed the wounded until they can be sent to real hospitals for operation or convalescence. In a certain sense the field surgeon performs the functions of the city ambulance surgeon.

Certain battlefields in Europe have been noted for the large number of cases of tetanus developed among the wounded. It was found twenty years ago that in these localities the acillus was present in the rich garden soil. It now seems that the modern method of digging shallow trenches for concealment and protection is exposing the soldiers more than ever to this infection, as the bacillus flourishes best at a depth of eighteen inches. The cases are reported to be so numerous that special precautions have been published to the soldiers. Antitetanus serum has become a necessary part of the surgical equipment.—Editorial in *The International Journal of Surgery*.

Charitable Hospital Not Liable for Servants' Negligence.

The Supreme Court of South Carolina holds that it is contrary to public policy to hold a charitable institution liable for the negligence of its servants, when it has used due care in selecting them. A hos pital which was originally incorporated by several physicians and charitable bodies, but later conducted by the physicians alone under the same charter, under which no profits could be realized and all receipts were devoted to the maintenance of the institution, and which derived its revenues from gifts bequests, and fees paid by patients, and which treated some patients entirely free, and

charged others more or less, according to their circumstances, is held to be a "charitable corporation," which is not liable for its servants. A private charitable hospital is exempt from liability for its servants' negligence, the same as a public charity. In an action for injuries alleged to have been sustained by the negligence of the defendant's nurses in placing the plaintiff in a bed where there were hot bottles that burnt her severely, while she was unconscious, after undergoing a surgical operation, it was held that the fact that the plaintiff paid for her room and attendance did not render the hospital liable for the negligence of the nurses. The fact that the hospital was a training school for nurses did not destroy its charitable nature, that being a mere incident to the main purposes for which the association was chartered.—*Lindler v. Columbia Hospital*.

The Plague in New Orleans.

On October 1 the twenty-eight case of plague died, and on October 19, for the third time since the disease was identified in New Orleans, the city was declared free of human plague. Two cases occurred later. In the total of thirty cases recognized, eight in all have died, a mortality of about 25 per cent. There has been no official publication of the plague cases in detail, with the character of the disease stated, but for the largest part the cases have been bubonic, with the femoral glands involved. The prompt effect of large doses of serum have been remarked, and the recovery of so large a proportion of cases is attributed to the use and manner of using the serum.

More and more rat-proofing is being done every day, and a thorough clean-up has been accomplished already, but it is projected to do it again, and yet again.

The distribution of rodent plague is still practically within the limits of the district dubbed "infected" by the health officials, with a wide dissemination of foci. Prompt measures of fumigation, deratization, and rat-proofing are applied to the residence of building in which or on the premises of which an infected rat is found.

The *Mus norvegicus* has been found in large numbers, *Mus musculus* in about 25 per cent., the *Mus rattus* in about 8 to 10 per cent., and the *Mus alexandrinus* in less than 1 per cent. of the rodents examined up to October 12, numbering over 112,000. In the 181 rodents infected with plague, 172 were *Mus norvegicus*,

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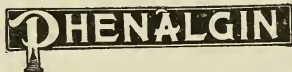
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The rat-proofing ordinances are being regularly enforced, and throughout the city of New Orleans the work is going on. —New Orleans Medical and Surgical Journal.

Foot-and-Mouth Disease.

For some weeks past this specific infectious malady has occasioned considerable trouble, involving very material losses to the owners and dealers in cattle in a dozen or more States. While not so destructive as Steppe-Murrain or rinderpest; or Pulmonary Murrain, also known as Contagious Pleuro-Pneumonia;; Vesicular Murrain, Aphthous Fever or Foot and Mouth Disease is a remarkably contagious malady of domestic animals, especially those with cloven feet. It is marked by blisters on the mouth and feet and on the udders and teats of females. It is communicated by contact or contiguity with diseased animals or articles and substances infected by them; also by the use of milk of such animals. It was first introduced into this country from Canada in 1871, and prevailed in Northern New York and New England; but the infected cattle were isolated, and the disease disappeared. It was brought again into Baltimore by importation of Channel Island cows in 1883, but was again soon eradicated. Subsequently other outbreaks of limited duration and spread have been noted; but none perhaps, so extensive as the present.

It is highly infectious, being disseminated not only by communication and commingling sick with healthy animals, but also by manure, litter, stable utensils, clothes and boots of attendants and veterinary surgeons, and by cattle cars. Even healthy cattle passing over roads previously traversed by cattle suffering from the disease is sufficient to produce it in non-infected animals. The vitality of the virus is not considered to be usually very great, markedly less than some other infections; and it is said, that as a rule the danger ceases at the end of thirty days after the recovery of the last animal in an infected herd; yet instances are given in which troughs, hay-racks, and stables have caused fresh outbreaks after the lapse of several months. Therefore, successful efforts to eradicate the disease require thorough disinfection of stables and utensils, with complete destruction of all litter and manure. burning the former and mixing the latter with quick-lime.

Foot and Mouth Disease is peculiar to

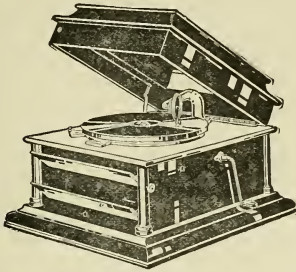
cloven-footed domestic animals, cattle, sheep, goat, and swine, but may be communicated by them to the horse, dog cat, rat, and poultry, and also to man. On the latter account it is of special interest to the practitioner of medicine. It may also occur among the wild ruminants, such as deer, buffalo, camel, llama, and antelope.

The symptoms of the disease in cattle, briefly stated, are chilliness followed by increased temperature, heat and redness of the mouth, soreness of the udder, lameness, and inclination to lie down. On the second or third day large blisters appear in the mouth and between the hoofs; these soon breaking leave raw ulcerations; sometimes so severe as to cause the hoofs to fall off and the bones of the feet to decay. It may be confounded with other riscaes, such as footrot in cattle and sheep, cow-pox, and poisoning with corrosive agents; hence care is needed in making a correct diagnosis; however, there is not much difficulty, especially when we consider the rapidity of its spread, and a careful history, together with the combination of the leading clinical features. In the pig and sheep the lesions are manifested chiefly on the face, although there may be eruptions on the snout and free borders of the lips. Sows suckling young may have an eruption on the mammae and teats, but in the sow and ewe this is not so frequent as in the cow. Young pigs infected through milk have both mouth and intestinal lesions, and in severe form. While the disease is rare in fowls, yet when it occurs there may be vesicles or sores on the feet and legs, or in the mouth and on the comb.

The period of incubation is short, the disease usually developing in from three to eight days from the time of exposure; but in rare instances it may not appear in from two to three weeks. When conveyed from milk it is quite short in both man and animals, being only from twelve to twenty-four hours.

In cattle the severest lesions, as a rule, are in the mouth, and they have great difficulty in eating, although lameness does occur, and in some cases very severe ulcerations of the feet; while in sheep the foot lesions are usually most severe, and they will not walk about in search of food, but will spend most of the time in lying down.

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"The anxiety that has been expressed in several quarters in regard to the effect upon human health of the present outbreak of the Foot-and-Mouth Disease is regarded by Government authorities as somewhat exaggerated. The most common fear is that the milk supply might become contaminated, but in view of the precautions that the local authorities in the infected areas are very generally taking, there is comparatively little danger of this. Milk from infected farms is not permitted to be shipped at all. The only danger is, therefore, that before the disease has manifested itself some infected milk might reach the market. For this reason experts in the U. S. Department of Agriculture recommend pasteurization. As a matter of fact, however, pasteurization is recommended by the Department anyway for all milk that is not very high grade and from tuberculin tested cows.

"It has been demonstrated by experiments which have been made in Denmark and Germany that pasteurization will serve as a safeguard against contagion from the Foot-and-Mouth Disease just as readily as it does against typhoid fever, but in any event it must be thoroughly done—the milk must be heated to 145 degrees Fahrenheit and held at this temperature for 30 minutes.

"In this country the Foot-and-Mouth Disease has been so rare that there are few recorded cases of its transmission to human beings. In 1902 a few cases were reported in New England, and in 1908 in a few instances eruptions were found in the mouths of children which were believed to have been caused by contaminated milk. In both of these outbreaks, the sale of milk was stopped as soon as the disease was found among the cattle. As long, therefore, as the disease can be confined by rigid quarantine to certain specified areas, the danger from this source is very small. Should the pestilence spread all over this country and become as general as it has been at various times in large areas in Europe, the problem would become more serious. Under any circumstances, however, pasteurization would be an efficient remedy. Where pasteurization is not possible, and where there is any reason to suspect that the disease may exist, the precaution of boiling milk might be advisable. Simple directions for pasteurizing milk at home, however, are contained in Circular 127, which will be sent free on application to the U. S. Department of Agriculture.

"Cows affected with the malignant form of the disease lose practically all of their

milk. In mild cases, however, the decrease may be from one-third to one-half of the usual yield. The appearance of the milk also changes. It becomes thinner, bulish, and poor in fat. When the udder is affected, the milk frequently contains coagulated fibrin and blood, so that a considerable sediment forms, while the cream is thin and of a dirty color. These changes, however, occur only when the disease is in an advanced stage and, as a matter of fact, the disease is not permitted to pass into an advanced stage, as any stricken animal is at once slaughtered.

"Men who come in contact with diseased animals may also become infected. In adult human beings the contagion causes such symptoms as sore mouths, painful swallowing, fever, and occasional eruptions on the hands, finger tips, etc. While causing considerable discomfort, however, the disease is rarely serious. Where it is very prevalent among animals, some authorities believe that it is fairly general among human beings, but that the disturbances it causes are usually so slight that they are not brought to the attention of the family physician. There is, however, a very good reason for every one giving the diseased animals as wide a berth as possible—namely, that otherwise they may easily carry the disease to perfectly healthy herds. Federal inspectors engaged in the work of eradicating the pestilence are thoroughly equipped with rubber coats, hats, boots, and gloves, which may be completely disinfected; and others who lack this equipment are strongly urged not to allow their curiosity to induce them to become a menace to their own and their neighbors' property.

"According to the specialists of the Department of Agriculture people even in States quarantined for the Foot-and-Mouth Disease need have no fear of eating meat, provided they cook it thoroughly. The Foot-and-Mouth Disease is not easily communicated to human beings through food, although milk from a diseased cow might transmit the disease to a human being. In the case of milk, however, pasteurization will render it entirely safe.—Editorial in *The Southern Practitioner*.

Abdominal Operations.

Intra-Abdominal affections have so engrossed the attention of the profession of late and so much new light has been thrown upon this branch of medicine by pioneers as the Mayos, Sir Arbuthnot



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Lane, Mayo Robson, Sir Berkeley Moynihan and others that our ideas concerning certain abdominal maladies have been completely changed. Like in all closed cavities until very recently our opinions as to what was going on had to be made from symptoms alone. It was indeed wonderful the diagnostic accuracy acquired by some under such conditions. Today the X-ray enables us to reach fairly accurate conclusions as to what is happening within the abdominal cavity. However, so far, the greatest progress in abdominal diagnosis was made through the exploratory incision of the pioneer surgeons mentioned above. They each and every one taught the lesson that chronic indigestion meant more than dyspepsia, that it meant disease of the gall-bladder, appendix, or other organ. We are therefore fortunate to have a book from the pen of one of these pioneers, one who had indeed done much to advance our knowledge of abdominal maladies, one who subscribes to his own opinions and observations, not others. Now for the third time Sir Berkeley Moynihan, M.S. (London,) F.R.C.S., has rewritten and revised his book, "Abdominal Operations," and presented it to the profession in two volumes. As previously, the book is simply written and well illustrated. But best of all, after reading one is struck with the personality of the author permeating every page. Whether you are reading about symptoms, diagnosis or treatment, you are immediately impressed with the personal element entering into the make-up of the book. Rarely is it one's good fortune these days to procure a book expounding the opinions of the author alone, so that when one does come across such a book one is prone to give it more than the ordinary prominence. The latest surgery of the stomach, gall-blad-

der, biliary passages, large and small bowels and other intra-peritoneal organs is fully discussed by the author and amplified by magnificent illustration.

We are in thorough accord with the author's statement: "The surgical treatment of cancer of the stomach still leaves much to be desired. The medical treatment is now, as it always has been, absolutely hopeless, and still involves a mortality of 100 per cent. The crying need in cases of carcinoma, not only of the stomach, but of all other parts of the alimentary canal, is for earlier diagnosis, and the chance of earlier surgical treatment. Amongst the notable achievements of surgery in recent years, chiefly as the result of the work in the Mayo clinic, is the proof that in a large proportion of cases the onset of cancer in the stomach is not a new and unaccountable thing, but is, on the contrary, a tardy development upon an earlier condition which for years has clamored for recognition."

He further states: "I am, of course, well aware that all cases of cancer of the stomach, unhappily, do not come to the surgeon. Not one but the surgeon can do any good to a patient so afflicted. Yet there is a strange timidity of approach to the surgeon which is unaccountable, and far too often the favorable period in the history of the case is allowed to slip away before any recognition of real conditions is attempted." These few extracts admirably exemplify the character of the book. And, as here, throughout the author manifests a calm, judicial spirit in disposing of mooted questions.—Editorial in The Maryland Medical Journal.

The Significance of Blood-Pressure Readings.—MacWilliam and Melvin (British Medical Journal) emphasize the importance of estimating the minimal or diastolic pressure, a practice which is now becoming more generally recognized. With the easy applicability of the auditory method there is no difficulty in the way of its routine use. Apart from the influence of aortic diastolic pressure in determining the strain upon the closed aortic valves, and the resistance to the opening of these valves by the ventricular systole, the distending force of load which it imposes on the arterial tube is of prime importance. The properties of the arterial wall are such as to show relatively great effects from long-continued tension as compared with the transient application of distending force, as in the brief rises of pressure that constitute the systolic waves. The greater proneness of the leg arteries to degeneration is especially associated, in all probability, with the high diastolic pressure in the erect position, rather than with the concomitant increase in the systolic level which is also induced by the influence of gravity. The evidence available at present is insufficient to show in what measure the injurious effects of an excessive diastolic pressure are to be attributed to the influence of mechanical strain upon the tissue elements of the arterial wall, and to the influence of a high distending pressure on the flow of blood and lymph in the walls of the arterial tube. The more common conditions when the circulation is defective: Low systolic and diastolic readings (as in hemorrhage, shock, etc.) or a systolic pressure which may be normal or even higher, attended by an abnormally high level of diastolic pressure, as in some cases of slow cardiac failure. Here the peripheral resistance is increased, keeping up the systolic pressure, notwithstanding a poor cardiac output, but this involves a high diastolic pressure—that is, a small pulse pressure and associated defective movement of the blood. It is only in a small minority of cases with thickened and contracted arteries that a notable reduction of the systolic reading is induced by local compression. If the pressure readings from two limbs differ markedly on account of the occurrence a special form of closure in one artery as compared with the other, the pulse persisting much longer in one than in the other, it might be possible to elicit special evidence bearing upon the different conditions. In a case studied by

the authors it was noteworthy that the systolic readings were much higher with the armlet on the calf of the leg than when on the thigh; the latter often nearly with the arm. They conclude from such results that the systolic pressure was really the same in the arm and leg, though the latter pulse was strikingly cut down to one of very small volume, which persisted until the compressing armlet pressure had been raised much higher. The authors interpret this result as being due to a different form of closure in the arm and leg arteries respectively, and they regard the leg arteries as the ones in which the behavior of the tube under compression was peculiar. The presence of contraction—that is, muscular resistance—is very important in human arteries when associated with certain abnormal structural conditions, determining the occurrence of special features in the process of closure of the vessel by external pressure, and thus leading to different readings of obliteration pressure that do not correspond with differences in the actual systolic pressure.

Adrenalin in Asthma.—Hertz (British Medical Journal) recalls the fact that the effects of subcutaneous injections of adrenalin have recently been discussed in a number of papers. From a considerable personal experience Hertz has come to the conclusion that the dose generally used for asthmatic attacks is much greater than is necessary. The first dose he ever gave himself, about two years ago, was 3 minims of 1-in-1000 solution of adrenalin chloride. The relief of the asthma was almost instantaneous, but he felt extremely ill for some minutes, his hands shook so much that he could hardly put the syringe away, and his pulse became very rapid. Since that date he has given himself a large number of injections, but never more than 2 minims, and rarely more than one; for slight attacks half a minim has been sufficient. With these small doses the only effect he ever experienced is relief of the asthma, and this is invariable. No attack has kept him awake for longer than five minutes, except on one occasion when he broke the syringe, and was consequently awake all night. His pulse is hardly accelerated, and he does not feel the slightest discomfort. The relief is so rapid that he falls asleep within a minute or two of putting the syringe back into its case. Small doses of this kind have the further advantage

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that they are unlikely to have any permanent ill effect, such as the production of atheroma. Even if three or four doses are required in twenty-four hours, which is most unusual, the total amount injected is less than is commonly recommended for a single injection.

Ductless Glands and Their Influence in the Liver Function.—By Whipple and Chirstman (Jour. of Exper. Med.) say that vegetative neurology through the study of physico-chemical metabolism is opening up as a specialty almost of its own as a fundamental stratum of neurological knowledge. The relation of liver function to certain vegetative neurological structures is here discussed. The authors find that when phenoltetrachlorphthalein is injected intravenously, it is eliminated from the body in the bile through the hepatic cells. The feces may be collected after purgation and the phthalein extracted and estimated. Given a definite liver injury by means of poisons (chloroform, phosphorus, etc.), the amount of phthalein excreted will be diminished and the fall in the output will be proportional to the amount of injury. With an acute fatal poisoning the curve may fall to zero. Under certain conditions of vascular interference the liver phthalein may show a decreased output; in passive congestion of the liver and with the Eck fistula the liver output may fall much below normal. Known disturbances of the liver function, due to parenchymatous injury or to vascular disturbances are indicated by a fall in the curve of the phthalein excretion. Conversely a drop in phthalein excretion may serve to indicate a decrease in the functional capacity of the liver even if there be no histological changes visible under the microscope. Adrenal insufficiency from extirpation of three-fourths or more of the gland tissue is associated with a drop of liver phthalein excretion. With hypertrophy of the adrenal fragment the

excretion returns to normal, but again may fall when more adrenal tissue is removed. Pancreatic insufficiency causes a progressive fall in the phthalein excretion indicating a graver lowering of the functional capacity of the liver. This observation has a direct bearing on the question of the neurogenic forms of diabetes. Parathyroid insufficiency with tetany causes no decrease in phthalein output, but at times a rise above normal. This comes out best when the phthalein curve is low, following pancreas extirpation. Parathyroid tetany may cause hyperactivity on the part of the liver cells. Thyroid insufficiency produces no change in the uniform curve of phthalein excretion. Hypophysis insufficiency shows an initial fall in the curve, followed by a return to normal and a final drop in the last few days before death. These experiments serve to show that the liver is very much concerned in the derangement that follows the removal of the ductless glands. It is therefore highly probable that disturbance of the liver function may be an important factor in the general syndrome of ductless gland insufficiency.

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Cubitus Varus Following Fracture of the Lower End of the Humerus.

Turner reports a case of a female, aged 13 years, who was admitted to the hospital in January, 1913, for deformity of the left elbow. Six and a half years before she had a fracture of the lower end of the humerus as the result of a fall. The fracture appears to have been treated with an internal angular splint. The deformity followed the fracture, and for the past two years the elbow has been so painful that it could scarcely be used. On admission full flexion was possible, but on straightening the arm it became markedly adducted at the elbow owing to the alteration of the carrying angle, and could be over-extended. Pronation and supination were normal. All movements caused much pain. At the operation the humerus was divided transversely immediately above the condyles, and the arm put up in a position of full flexion. Massage and passive movements were started at the end of two weeks. The axis of the forearm now bears practically the normal relation to that of the arm and the joint can be freely moved without causing pain. Full extension is however impossible. Functionally the arm has been greatly improved by the operation.—Proceedings of the Royal Society of Medicine.

Pathogenesis of Congenital Hemolytic Icterus.

Chauffard reports an interesting group of cases of this condition occurring in one family. This group comprised a father who was jaundiced from birth and twin daughters aged 17 years, both of whom were also icteric from birth. There was another daughter aged 8 years who was not jaundiced. In studying this group of cases the author has come to the conclusion that congenital hemolytic icterus has a pathogenesis of a dual nature. There is an hereditary factor either syphilitic or tuberculous and a factor consisting in the hemolyzing reaction of the spleen. Unfortunately up to the present time no cure has been obtained. The administration of neosalvarsan to the twins had a doubtful effect. Radiotherapy applied to the spleen has been reported by Paesio and Heully in 2 cases with appreciable results. Splenectomy has been reported as an important measure but the operative mortality is quite high.—Annales de Medicine.

Abscesses of the Larynx in Childhood.

Descottes reports thirty cases of this condition which he regards as relatively rare. Laryngeal suppuration may occur following measles, grip, diphtheria, vari-

ola, scarlatina, and typhoid fever, but chiefly following diphtheria, measles, and grip. In retropharyngeal abscess the pus may be secondary to a laryngitis, either diphtheric or non-diphtheric. In diphtheria perilaryngeal suppuration occurs, most frequently following intubation as the result of ulceration of the larynx. The symptoms of abscess of the larynx are obscure. There may be a tumefaction of the tissues of the neck or an edema of the glottis. As soon as the diagnosis is made or suspected, prompt incision from the outside is imperative.—Rassequa di Pediatra del Prof. Cattaneo.

Case of Osteitis Deformans; Operation for Fractured Femur.

Taylor reports the case of a patient aged 56, who was admitted to the Middlesex Hospital on April 29, 1913, for a fracture of the middle of the shaft of the right femur. Attempts to secure proper apposition of the fragments by means of splints and extension were not successful, and on May 16 an operation was performed, and the fragments were fixed by means of a Lane's plate. Recovery was uneventful, and he was transferred from the wards to the out-patient department under the author's care on July 16. Before leaving the wards he was discovered to be suffering from osteitis deformans. Both femur and tibia were bowed; the upper part of the spine was fixed in its bowed position; the clavicles were enlarged and the bones of the upper extremity were also slightly curved. There appeared to have been no change in the dimensions of the cranium. The condition did not appear to have influenced the union of the fracture in any way.—Proceedings of the Royal Society of Medicine.

Abnormal Cysts on Shoulders.

Eris Pritchard reports the case of a twin, aged six weeks. The mother was confined at home and was attended by a midwife; the first of the twins was delivered head first; in this one the presentation was said to have been that of a shoulder (left). The midwife, without calling in assistance, performed version, and immediately after birth the two cystic swellings, were observed on the left shoulder in the position which they still retained. The infant was brought to the author's Infant Consultations when it was eight days old. At this time the two cystic swellings were slightly larger than they had been. Although each fluctuated freely on palpation they did not appear to communicate. They were stated to

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have increased in size since birth. Three cubic centimeters of the fluid were drawn off with a hypodermic needle; it was blood stained, and partly coagulated on standing. The swellings appeared to be of the nature of abnormal and persistent capita succedanea.—Proceedings of the Royal Society of Medicine.

The Home Hospital.

The medical profession, constructive sociologists, and society in general owe a debt of deepest gratitude to the New York Association for Improving the Condition of the Poor for its demonstration at the Home Hospital that the cure of tuberculosis is in the main dependent upon the cure of poverty. While we have held this to be so as an axiomatic truth, and have been able to marshal some proofs of it, it has remained for the Association to carry out a carefully conceived plan aimed to test thoroughly the soundness of the proposition that society must regulate its housing conditions and the wages of its families if it seriously contemplates the prevention of tuberculosis.

What the Association has done has been to treat both the poverty and the tuberculosis in sixty-four families over a period of two years, at an expense of \$61,932.96, of which \$12,313.06. was earned and contributed by the breadwinners of the families supervised. The per capita per diem cost of caring for patients in the Home Hospital has been exceptionally low as compared with that of any existing sanatorium or hospital—and the medical and normal results have averaged better than those which institutional care has been able to show. The Association not only has given the patient himself the best care but has held the family together and maintained decent standards of living for all concerned. It can readily be seen how the psychological factor must have operated for good in this wonderful experiment—the idea and organization plans of which originated in the mind of Charities Commissioner Kingsbury—for good food, proper clothing, a sanitary home and skilled medical attendance were guaranteed to the handicapped victims. Where the tuberculous breadwinner's earnings fell short, the Association stepped in and made up the difference. Therefore were the homes happy, want, worry and anxiety being banished.

Of the 315 persons concerned, 207 were patients and 108 family members. All the families improved in health and

their average weekly earning capacity increased from six to fifteen dollars. No new cases developed among these people during the two years of the experiment.

This reads like "A Christmas Carol" reduced to actuality. It is better than all the talk in the world. We have been affirming for a long time everything that the experiment has demonstrated but we have felt as did Corpernicus about his merely abstract Galileo did when he actually saw through his crude "telescope" Jupiter's revolving moons. When theory resolves into fact men set themselves to logical tasks. The logical task for human society in the coming century is the cure of poverty. An experiment of the sort described in this editorial brings us vastly nearer the goal of social decency. It does not tell us what the cure is, but it quickens constructive thought, for it has applied a vision. The Utopias have failed because they could not be demonstrated; they have, indeed, been undemonstrable.

Piers Plowman, in fourteenth-century England, saw a vision in which the them shockingly oppressed and brutalized peasantry were relieved of their exploitations. Demonstrations slowly followed down the centuries, proving the great and shadowy dream sound and applicable, until in time the yeomanry of England emerged. Medical writers have haltingly voiced or late, and earnest sociologists have seriously considered, pleas for a better social order than that we know—a social order in which no one would dream of persecuting the consumptive and making a pariah of him, as is now too frequently done, but in which few cases of consumption would occur, and those be lovingly for under decent economic conditions. What we know as the Crusade against tuberculosis must change radically in principles and in form, for a mighty demonstration of the soundness and applicability of our condemned medical dreamers' visions has been given.

When we shall cease to have poverty, and charity, and tuberculosis, we shall cease to have war—and not before. The mind attuned to any one of these anachronisms is attuned to all, and therein lies the reason for our laggings in the fetid marshes that skirt the highway of the centuries.

The knights who sought the Holy Grail had no more inspiring mission than the workers of to-day whose high commission charges them to rout the forces of social indecency in whose slimy trail

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the bacillus of Koch finds such an excellent culture medium.

—Editorial in The Medical Times, New York.

Septic Processes.

A deficiency of alkali is responsible for defective production of antibodies. By administering alkalies the author is convinced that he has tided certain patients past the danger stage who would have been lost without it. He mixed 10 or 20 Gm. of sodium bicarbonate in a bottle of seltzer water and had the patient drink this during the day. Children took half this amount. Some of the patients took it for weeks without disturbances; a healthy stomach rebels at these large doses of an alkali. Sometimes pain in the stomach compelled suspension for a day or so, but diarrhea was regarded as useful unless too profuse. The alkali can be given by proctoclysis or by intravenous infusion. The cases reported were of severe septic processes, osteomyelitis, scarlatinal nephritis with abscess, etc., and all recovered.—Vorschutz Deutsche Zeitschrift für Chirurgie.

acne pustules, acute otitis, coryza, influenza, enlarged glands, gingivitis, incipient dental abscess, etc. Even when suppuration has occurred it frequently happens that, under nuclein, the inflammation subsides and the pus absorbs. The product has a beneficial action on keratitis, iritis, dacrocystitis, and, in a lesser degree, on conjunctivitis and chronic middle ear disease.

Other observers have recorded its effect in improving general nutrition and increasing resistance to pathogenic germs. The author is convinced that there is much more rapid healing of operation wounds and less danger of sepsis if nuclein be administered.

A more powerful preparation for phagogenic treatment is the mycolysin of Doyen, of Paris. This is stated by him to be "a preparation of phagogenic colloids extracted from a certain number of natural ferments," and has an even more powerful effect than nuclein in producing increased phagocytosis. These remedies, nuclein and mycolysin, deserve more extended use.—Henry London Lancet.

Eye and Ear, Phagocytic Treatment of Diseases of.

Report of a case suggesting that the ordinary treatments of ocular inflammatory affections can be strongly reinforced by the phagocytic action of nuclein. This case was but one of many in which the author found nuclein of decided benefit. If given in time it aborts styes, boils,

Duodenal Feeding.

The indications for duodenal feeding are obstinate, recurring cases of ulcer of the stomach or duodenum, particularly if severe pains are present. Before an operation is decided upon, the tube should be used for four weeks or more. A bleeding virtually never results if the tube is soft, yet the stools should fre-

quently be examined for blood. Other indications are nervous anorexia and vomiting, also if the cause is pregnancy and there is marked loss in weight. In some cases of carcinoma of the stomach, where the pylorus is passable, this form of feeding may also be used with advantage. The food generally used is a mixture of $1\frac{1}{2}$ to 2 litres of milk with $\frac{1}{2}$ to $\frac{3}{4}$ litres cream to which may be added 8 eggs and 100 to 200 grams of sugar. Distress is present in only few cases in the form of slight colic, which can easily be controlled with opium, belladonna or hot applications. As a rule, constipation has to be corrected with mild laxatives. Special care is necessary to keep the mouth clean. Most drugs necessary may be added to the food.—Berl. klin. Woch.,

Treatment of Mycosis Fungoides.—

Dore, in The London Lancet, says that effects of the X-rays on the tumors of mycosis fungoides are strikingly favorable. Even after half pastille doses, reaction may begin as early as the third day, reach its height in a week, and be followed by complete disappearance of the tumor under treatment in two to three weeks. The granuloma melts away without leaving any scar, and on the scalp there may occur a regrowth of hair over the previously affected areas. The early lesions, being firmer, are less easily affected by the rays than the later ones. Although the benefit of X-ray treatment is locally so marked, the rays seemingly fail to influence the cause of the disease itself, for fresh lesions continue to appear in cases under treatment, and the final outlook is not a hopeful one. Whitfield has reported a case, however, in which the X-rays had apparently brought about a complete cure. The patient, a man sixty-eight years of age, was in perfect health five years after the termination of the X-ray treatment.

The Pathogenesis of Epidemic Poliomyelitis and the Localization of the Virus.—Flexner and Amoss (Journal of Experimental Medicine) find that the virus of poliomyelitis can penetrate the retina without producing apparent injury, to reach the central nervous organs. The virus injected into the blood is deposited promptly in the spleen and bone marrow, but not in the kidneys, spinal cord or brain. Notwithstanding the affinity which the virus possesses for the nervous tissues, it is not removed from the blood by the spinal cord and brain until the

choroid plexus and the blood vessels have suffered injury. The intervertebral ganglia remove the virus from the blood earlier than do the spinal cord and brain. An aseptic inflammation produced by an intraspinal injection of horse serum facilitates and insures the passage of the virus to the central nervous organs, and the production of paralysis. The unaided virus, even when present in large amounts, passes inconstantly from the blood to the substance of the spinal cord and brain.

When the virus within the blood fails to gain access to the central nervous organs, and to set up paralysis, it is destroyed by the body, in the course of which destruction it undergoes, as a result of the action of the spleen, and, perhaps, other organs, diminution in its virulence. The histological lesions that follow the intravenous injections of the virus in some, but not in all cases, differ from those which result from intraneural modes of infection. In escaping from the blood in the spinal cord and brain, the virus causes a lymphatic invasion of the choroid plexus and widespread perivascular infiltration, and from the latter, cellular invasions enter the nervous tissues. A similar lymphoid infiltration of the choroid plexus may arise also from an intracerebral injection of the virus. The histological lesions present in the central nervous organs in patients with poliomyelitis correspond to those that arise from the intraneural method of infection in the monkey. The virus in transit from the blood through the cerebrospinal fluid to the substance of the spinal cord and brain is capable of being neutralized by intraspinal injection of immune serum, whereby the production of paralysis is averted. Carmin in a sterile and finely divided state introduced into the meninges and ventricles sets up an aseptic inflammation, but is quickly taken up by the cells, including ependymal cells. When an aseptic inflammation has been previously established by means of horse serum, or when the nervous tissues are already injured by the poliomyelitic virus, the pigment appears to enter the ependymal cells more freely. The experiments described support the view that infection in epidemic poliomyelitis in man is local and neural, and by way of the lymphatics, and not general and by way of the blood. Furthermore, they uphold the belief that the entrance of the infection is by means of the upper respiratory mucous membrane.



J. M. BAKER, M. D., TARBORO, N. C.

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Dr. Julian Meredith Baker.

Edited by Drs. D. W. and Ernest S. Bullock,
Wilmington, N. C.

Among the physicians and surgeons of mark in North Carolina Dr. Julian Meredith Baker, of Tarboro, Edgecombe County, N. C., merits special mention.

Dr. Baker was born October 26, 1857. He is descended from a French Huguenot family on his mother's and from the English on his father's side. For nearly a century this family has furnished a practicing physician and surgeon to North Carolina, Dr. Baker's father and grandfather both being physicians. Naturally, Dr. Baker early in life showed a decided taste for matters pertaining to medicine, sickness, relief of the distressed and scientific studies. This inclination was stimulated by the wise counsel of his father and the encouraging confidence of his mother.

Dr. Baker finished his academic course in 1877, obtaining degree of B. S. at the University of North Carolina, and two years later was graduated from the University of Maryland, passing the State Board the same year. His life has been spent in the work of a country physician and surgeon. He has enjoyed a large and lucrative practice in the immediate community and a consultation practice extending over the surrounding counties. His work has been principally confined to surgery and gynecology and he was a pioneer in doing modern surgical work in his section. Before the days of automobiles he frequently traveled a hundred miles with relays of horses. In the field of general surgery Dr. Baker has steadily advanced and has well earned the public confidence he now enjoys.

Dr. Baker founded the Pittman Hospital at Tarboro, N. C., of which institution he is now chief surgeon, and is instrumental in increasing its efficiency for the public welfare, for charity and for relief of the afflicted in that community.

Dr. Baker has always kept pace with the best in his profession and from time to time has taken post-graduate courses, specializing on surgery and gynecology at the New York Polyclinic and Bellevue Hospital in 1883, 1894 and 1900.

In the societies of his profession the following offices have been conferred upon him: President North Carolina Board

of Medical Examiners in 1896; member of the North Carolina Board of Health; President of the North Carolina Medical Society. He is also surgeon for the Atlantic Coast Line Railroad; Surgeon to the Pittman Hospital; Assistant Surgeon General on Staff of Gov. Scales and Gov. Fowle.

The obstacles thrown in the way of larger measure of success are due to his natural characteristics, which caused him to hate a sham, or hypocrite. He is outspoken in regard to persons and things, regardless of circumstances and has always been true and loyal to his friends.

The lesson to be learned from the life of Dr. Baker is to stick to friends, be honest and upright in dealings with all, assume a high ideal at the beginning of life's work and never let outside matters divert you from the course mapped out. Work hard to qualify for your life work and above all be faithful to every trust however small which is placed in you.

The Medical Society of Virginia and its Component County Societies.*

By Southgate Leigh, M. D., F. A. C. S., Chairman
Committee on Component Societies,
Norfolk, Va.

Mr. President and Members of the Southside Medical Society:

I appreciate deeply your kindness in permitting me to address you on the subject of the State Medical Society. I am glad of the opportunity of discussing with you for a few minutes the splendid advantages of the new plan of organization which if properly carried out and fully developed is destined to do so much for the profession of the entire state.

In these modern times the success of every important enterprise or business depends upon organization and system. Our profession from one cause or another has been lax in such methods and has both individually and collectively suffered in consequence. We are now awakening to the necessity of co-operative effort and the new plan of organization, started a little over a year ago, is rapidly gaining in favor and popularity.

Our Committee needs your active help, both in completing the organization and

*Read before the Southside Medical Association at Petersburg, Va., December, 1914.

in strengthening and developing the system.

The State Society is not only not opposed to such organizations as the "Southside," but feels much interested in your success and is anxious to aid in your development. At the same time we need your help in carrying out to its full extent the co-operative plan which promises so much for our profession.

At the last meeting of the State Society our Committee reported briefly as follows:

Number of Societies granted charters.....	47
Number of Counties combined with others	7
Making a total of counties chartered.....	54
Counties organized or in process of organization	23
—	—
Total	77

Leaving only 23 counties not looked after.

Number of new members added to the State Society chiefly through the Component County Societies about 300. This number will be materially increased as the organization work proceeds.

The Committee was continued and enlarged to provide for a member from each Congressional District.

The report shows a remarkable result for so short a time. This was due to the splendid assistance rendered by the Councillors and individual members of the Society, as well as to the good work of the organizers loaned us by the A. M. A.

Only two counties in the District covered by your society have not as yet been chartered, Amelia and Nottaway. Both have been organized. In some of the chartered counties much good work has already been done and a great deal of interest and enthusiasm developed. A few are apathetic due largely to to not being fully informed as to the advantages of organization. There is every advantage in getting together and absolutely not a single disadvantage. Only two objections have been raised. One is the fear that the A. M. A. is trying to get a grasp on the state Association. Formerly I had that mistaken notion myself, but soon found that I was in error. There is no such danger. Under the new plan it is proposed to charter a local society in every county in the state where possible. In those few counties where there are only 3 or 4 doctors, widely scattered, they are asked to become members of an adjoining

county society. Each local society becomes a component part of the State Society and the uniting of all of the county societies together forms and absolutely controls the state society. The local societies elect the Councillors and later it is proposed to have a House of Delegates formed of representatives from the local societies. In the future no one can join the state society except through the local society, membership in such local society making one automatically a member of the state society. When the plan is completely carried out, and this will almost certainly be done before the next meeting, the physicians of Virginia will have under their control a powerful organization, which may be used to accomplish great good for the profession and for the people. For instance, in the past the society has had difficulty in directing and controlling the State Legislation, so important for the profession. In the future through the strong local organizations the various legislators will have all such matters made plain to them by their local medical friends before the State Legislature convenes. As a rule the local physician is one of the most influential men in his community and his advice and counsel will have great weight with the local representatives.

With our organization completed and in good working order, such weighty matters as the abolition of physicians' license tax, the strengthening of the State Board of Health, proper laws governing and safe-guarding the practice of medicine and the prohibiting of irregulars may be looked after and gotten through the Legislature, expeditiously and with little trouble.

As a simple, though most successful, example of the good effect of organized effort, I would mention the action of the Norfolk County Medical Society in appointing a special committee to have remitted the local license tax. This Committee arranged to have three or more physicians visit each Councilman and explain to him the reasons for and justice of the plea. The result was that after ten days work every one except four of the forty Councilmen voted in favor of the measure resulting in an annual saving to the Norfolk doctors of about \$3500.

Every town and city in the state would remit this tax if the facts were made plain to them, that is if they were shown how much work the doctors were doing for the various communities, not only

without compensation but at an actual financial loss to themselves.

The local society if thoroughly organized can be of incalculable help to the local profession in regulating fees and aiding collections, in improving health, bettering the roads and schools and furthering many other public matters.

The local society brings the doctors more closely together, lessens bad feelings and elevates the tone of the profession. The improvement in these matters in certain counties is already most marked.

Some objection has been raised to requiring each member of the local society to pay dues for the state society, the local society collecting these dues and sending them to the state treasurer. A little consideration will quickly dispel this objection. It is easier for the members to pay through the local treasurer and none should object to the small tax which is necessary for the expenses of the state society. The transactions alone will repay the amount, and not to mention many other advantages, each Virginia doctor should be grateful enough to the state society for its splendid work in the repeal of the state license tax to be willing to contribute two dollars a year for the support of the state society.

The greatest advantage of all in the small local society in the future will be educational. Medical knowledge is changing and advancing so rapidly that the physician, wherever located, must be on the alert for the newer remedies and methods. This is an age of progress and development in every line of thought and work. One cannot stand still. He must either go forward or backward. Every spare moment of a doctor's life has to be devoted to reading and study if he is to keep abreast of the times, if he is to do his duty to himself and to those confided to his care. Unless he keeps informed as to all the practical aids to his work he is derelict in his duty.

The local society is the medium through which he may be kept best informed. Through frequent meetings, short papers and symposiums, discussions, reports of journals and books, reports of visits to clinics, conferring about cases and in various other useful ways, the local society more than any other agent is destined to stimulate, enthuse and educate the local doctor.

There is no telling the good that is to come to the Virginia doctors through the full and useful development of the Component County Societies.

Our Committee, therefore would beg each one of you to join us in this great work, which when completed will do untold good to the Medical Profession of our state.

The X-Rays in the Diagnosis of Fracture from a Medico-Legal Standpoint.*

By A. L. Gray, M. D., Richmond, Va.

In dealing with this phase of the subject I shall approach it from three standpoints: First, that of the patient; secondly, that of the surgeon; and thirdly, that of the Roentgenologist.

Of the necessity for a competent roentgen examination in suspected fractures in order to obtain an accurate knowledge of the conditions existing, there is little need of comment from me before this body. Suffice it to say that every individual, rich or poor, is entitled to a set of organs whose functions are specific. He or she is provided with them by an all wise Providence for his or her maintenance and for the betterment of others. Many of these organs depend for their usefulness upon the presence in their structure of bones of a certain definite shape and conformation. If by chance this shape or conformation be destroyed, some of the function or functions will be lost. The patient is therefore damaged in proportion. If this be true, then the individual should have the benefit of every available means of restoring the bony framework to its original condition. To this end the roentgen examination is indispensable.

Too often the attending surgeon who is usually the "family physician," with a most laudable desire to spare his patient expense, does not suggest or at least does not urge a roentgen examination, and finds too late that the "bones have slipped" in the dressing, as he supposes and a permanent impairment or deformity is the result. Has he not subjected this patient to a far greater expense than the cost of the examination? The excuse that the roentgen examination is not always available will hardly hold good in this state, at least at present. There are machines and operators in practically every town that has an electric plant, and no conscientious roentgenologist will see a patient turned away because of inability to pay his usual fee. Surely any one who can employ a doctor can bear the cost of the necessary plates.

For the attending surgeon, aside from his natural desire to possess a correct im-

*Read by title at a meeting of Medical Society of Virginia October 27-30, 1914.

pression of the nature of the fracture, position of the fragments, and extent of bone involvement for his guidance, there is nothing that can strengthen his position so much as a permanent record of his work as shown in the roentgen plate made after he has adjusted the displaced fragments and applied his fixation dressings. Malpractice proceedings have been comparatively rare in our Southern country, but the development of manufacturing plants and mechanical labor-saving devices has resulted in a proportionate increase in the number of injuries to employees and a corresponding increase in the fracture cases. While the corporation is the most frequent sufferer, the attending surgeon is by no means exempt from embarrassing litigation. It is no uncommon occurrence for the roentgenologist to be called upon with a view to instituting damage proceedings against the surgeon who may have handled the case with the utmost skill, and by some indiscretion on the part of the patient has failed to obtain a result satisfactory to either party, and becomes the victim of the wiles of the "shyster lawyer." If only a single examination can be made and the diagnosis of fracture is clear, it is far better that it be made after the permanent dressing has been applied. The diagnosis can then be confirmed or disapproved and any alteration necessary can be made. If the bones have been properly adjusted, the roentgen record is an invaluable protection.

The roentgenologist is probably often called upon to determine the merits of a suit for physical damages than any other medical or surgical specialist. To him the plaintiff is referred by one or the other parties to the suit in almost every case in which bone injury is claimed. If the plaintiff declines the examination when one is requested by the defendant, his or her position is materially weakened thereby, and that of the defendant correspondingly strengthened. On the other hand, a suit for bone injury would hardly be inaugurated by a careful attorney, unless he had previously fortified himself by having the exact condition of the injured part depicted by the roentgen rays so that a statement of the real extent of the injury and probable future results can be explained to the jury by a qualified roentgenologist.

It is well to add here a word of caution against the danger and serious consequences that may and frequently do arise from making examinations and reporting directly to the patient. The careful roent-

genologist never makes an examination for a patient, unless the case has been referred by some physician or surgeon, and always reports to the medical man the results of his findings. When a patient appears for examination without previous engagement, the first question asked is, "By whom has the case been referred?" If not by some reputable practitioner, the patient is told that the only condition on which the examination will be made is that the report of the findings shall be given to some doctor of the patient's choice and not to the patient except through him. By strict adherence to this rule much censure and unfavorable gossip, as well as many unjust suits may be avoided. Roentgen examinations inspire confidence and tend to satisfy the patient that the results have been the best obtainable, if the condition has been carefully explained and the prognosis has been conservatively made.

The position of the roentgenologist in medico-legal cases must be at times most embarrassing. Despite his care and strict adherence to ethics, an attempt will occasionally be made to make him assume the role of critic or censor of the work done by a fellow practitioner, and he should be constantly on his guard lest he be led into such a trap by the attorneys. After all the interpretation put upon a roentgen picture is a matter of opinion and the expert should always make this clear. He may without offense establish the value of his opinion and justify his position of expert by many legitimate means, and the weight of his testimony will be rated according to his demeanor on the stand.

Many courts have established the admissibility of the roentgen picture as evidence, but it must be properly introduced. The plates or prints of an injury must be identified by the person who has made them as those of the case in question, either by the maker appearing as a witness or by affidavit attached to the plate or print. The question has arisen whether or not a medical roentgenologist can be required by law to testify as to what the plates show. This matter seems never to have been decided by the Virginia Court of Appeals, and the decisions in other states are at variance.

I recently made a test in the case of *Renick vs. Va. Ry. & Power Co.*, Circuit of Richmond, Va., Judge R. Carter Scott presiding. Having been served with a subpoena *duces tecum* requiring me to appear and bring "certain X-ray plates" made by me of the plaintiff, I appeared, identified the plates, but declined to tes-

tify to my findings therefrom without adequate remuneration as expert witness. The Court ruled that the information received by an examination of the plates made was clearly in the nature of expert testimony and could not be required of me without a reasonable fee for services as expert witness.

No expert witness can place himself in a more embarrassing position or more effectually minimize the value of his testimony than by agreeing to appear on a contingency of recovery. He immediately becomes an interested party, and his opinions, however correct it may be, is of little consequence. The roentgenologist should carefully fortify himself by reviewing the case, before being placed on the stand and should recall fully the circumstances under which the examination was made.

I on one occasion referred to an injured hand as left, when the right was shown as having the deformity. The error was due to the picture having been made with the dorsum of the hand nearest the plate instead of the palmar surface, as is the custom. The plate had been shown me without my having previously gone over the full details. This position had been necessitated by the presence of a splint in his palm over which his fingers were closed. The error was detected, however, in time to correct the statement and explain the inadvertency before leaving the stand. The lesson learned was valuable and this mistake will not be repeated.

312 E. Franklin St.

Exophthalmic Goiter—Report of a Case. (Grave's Disease.)

By John Q. Myers, M. D., Charlotte, N. C., President Medical Staff Presbyterian Hospital, and Member of the Board of Medical Examiners of North Carolina.

A disease characterized by tachycardia with palpitation goiter exophthalmos and tremor, palpitation usually being the initial symptoms. The pulse ranges from 90 to 180 or higher. Occasionally the exophthalmos is so extreme as to produce in very extreme cases spontaneous dislocation of one or both eyes. Known as exophthalmos goiter.

Graefe's lid-sign—namely, inability of the upper lid to follow perfectly the downward movement of the eye—and, usually, Stellwag's sign: viz., apparent widening of the palpebral aperture, due to retraction of the upper lid. The disease is usually encountered in women; its course is chronic, and the ultimate outcome is recovery. Death, however

occasionally resulting. Is known as Exophthalmic Goiter.

The etiology is obscure, and the present state of our knowledge of this disease makes it difficult to draw therapeutic conclusions. The nervous origin, so confidently believed in that resection of the sympathetic nerve was done—and with good results in some instances—is no longer accepted. Yet, on account of accurate work done upon the innervation of the thyroid gland, especially by Brian and Wiener, it would seem that nervous processes are of great importance in this disease.

The disease occurs frequently in those of the neurotic habit. The theories propounded for the explanation of exophthalmic goiter may be placed in three divisions: (1) The cardiovascular theories, which locate the seat of the disease in the heart itself, in the vessels, and in the blood; (2) the mechanic theories, which connect the symptoms with compression of vessels or nerves in the neck by a primarily hypertrophied thyroid; (3) the nervous theories, which attribute the disease to disturbance in the vagus nerve, in the sympathetic nerve itself, or in the central nervous system proper.

The thyroid gland is the one most amenable to organotherapy, and its laws have been deduced from its study, one of them being that the addition of thyroid substance always increases thyroid secretion. If, then, Graves' disease is due to hypersecretion, administration of thyroid bodies should always be followed by increase in severity and number of symptoms. But in a certain, if not a large, number of cases the opposite holds good, so that we must either conclude that causation of this disease is not the same in all instances, or that the thyroid gland is not alone responsible, and we will have to follow the works of these of our profession who have done extensive work along the line of experimental medicine and surgery and take into consideration the internal secretion of at least the adrenals, the thymus, and the sexual glands must also be considered for etiology. So that it would seem that in the thyroid gland there is found the reaction of nervous, internal, secretory, and local (thyroid) processes. The acceptance of this would explain why partial removal of the thyroid frequently (not always) gives relief, as hyperfunction is prevented by production in quantity of secretory substance. It is for the future to prove the treatment of this disease; whether the treatment of the future will

be medical or surgical, or both, it is given to no one to foresee at present.

Up to this time I have treated twenty-six cases, and have only referred one case to the surgeon. Following the rules from reports of the clinics of the Mayos, Kocher, and Halsted, placing the patients in bed, treating the symptoms, and meeting the emergencies of Graves, symptoms with such treatment as the individual case requires, the time necessary being from two to six weeks.

A case.—Miss B., age 25, single, music teacher. Mother had goiter. Had typhoid fever at the age of 15. Began menstruating after convalescence of typhoid fever; menstruation regular, but very painful. At this time the thyroid gland slightly enlarged since puberty. A slight exophthalmous not so noticeable until three years ago, when she had an attack of appendicitis lasting for several weeks. After this acute attack was over, the appendix and right ovary were removed (the ovary was cystic and tube and appendix adherent.) She made an uneventful recovery, but the symptoms of exophthalmic goiter gradually, but persistently came on until October 17th, when she had an attack of tonsilitis, and during this time a sister became very ill, which gave the patient a good deal of anxiety. This apparently caused the nervousness to increase, the pulse went up to 180 and over—temperature 103, thyroid enlarged, the exophthalmos more marked, the patient growing delirious and cyanotic with muscular tremor and marked tachycardia. Entered the Presbyterian Hospital, and after four weeks' treatment patient is up, appetite good, sleeping well; all grave symptoms at first mentioned have disappeared, the thyroid gland apparently undergoing absorption. The exophthalmos has so improved that the use of her glasses, which were necessary before the hospital treatment, have been abandoned. The patient now has every indication of an absolute early recovery, and time is only necessary for the direction of future treatment, if necessary.

Treatment.—The psychological condition of the patient must be considered. Unless the physician does this, medical results will not be as favorable as they should be. We should never forget that we are dealing with a disease in which a nervous state is a cardinal feature. First of all, this nervous state should be treated as it is under any condition. Rest and protection from excitement are essential conditions of a successful treat-

ment. After this the treatment is merely directed to the symptoms.

Those physicians who do not understand nervous people and who do not sympathize with them should keep their hands off and not treat them medically. It requires sympathy, patience, tenacity, tact, and knowledge to treat these people. Call it psychotherapy or what you will, the fact remains that without these qualities in the physician therapeutic results are not satisfactory in most cases.

The remedies most used are Hydrobromide of Quinine, Digitalis and Ergot. In some cases where there is no cardiac lesion and the pulse is good and strong, Aconite with the Bromide is of service. There is a difference of opinion as to the propriety of administering iron. Tyson believes the decision should be based on the condition of the patient and on the presence or absence of anemia. Belladonna treatment is necessary in a large number of these cases.

The latest results of surgical treatment: Mayo has 70 per cent. of cures with a mortality of 4 per cent. When medical and surgical statistics are compared, it will be seen that the mortality in medical cases is far the smallest, so that the physician who recommends surgical operations in all cases of exophthalmic goiter should have at least exhausted all other means of treatment before subjecting the patient to a mortality, small as it may be, from surgical intervention. We do not deny that surgical treatment is necessary in many cases, but these should have the advantage of scientific medical treatment first (Mayo gives 25 per cent. not cured, or relapses after operation, which must necessarily return to the physician for treatment.) These cases, had they been treated before the operation, might have recovered so that at least the symptoms would not have returned after operation.

Conclusion.—If cases of exophthalmic goiter are put to bed in a well regulated hospital and given systematic, sympathetic treatment, all symptoms associated with the disease will eventually be relieved. That surgical treatment becomes necessary in certain cases has been stated above. That it is a logical and scientific mode of treatment is fully admitted, as a vicious circle is broken into when it is done.

The question that arises is whether all cases of exophthalmic goiter can be cured by removing more or less of the thyroid gland without medical treatment

Undescended Testicle—Why Not Up.*

By John S. Winter, M. D., Memphis, Tenn.
 Demonstrator of Operative Surgery, University of Tennessee; Attending Physician to St. Joseph's Hospital; Physician in Chief to St. Peter's Orphanage; Assistant in Gynecological Surgery to F. D. Smythe, M. D., F. A. C. S.; Assistant in Surgery to J. L. McGehee, M. D., F. A. C. S.; Resident Surgeon to North American Accident Insurance Company of Chicago.

Before commencing upon the operative phase of my paper, I wish to go back in the life of the prospective patient to the foetal period.

Gray says:—"At about the fourth month of foetal life the testicle is an abdominally situated organ, laying just below the kidney, and, as is the kidney, extraperitoneal."

At the beginning of the seventh foetal month the testicle lies just inside of the internal abdominal ring, ready to begin its descent through the inguinal canal to the scrotum.

At about the eight foetal month the testicle should have completed its downward journey and be safely within the scrotum.

So, we see from this anatomical report that it is at some time during the beginning of the seventh and the end of the eight months of intrauterine life that the evolution of the testicle is interfered with, and to such an extent that there is very little change in its position in the after life of the individual.

I have no statistics in mind to show whether these mal-positioned glands functionate or not—it is my opinion that some do and some do not—that point is not under discussion in this paper; but merely the advancement of a method intended to put the gland—functionating or not—out of harm's way.

It is well known fact in surgical circles that ninety per cent. of the operations for undescended testicle result in failure through death of the gland from trauma, interrupted circulation, infection, or some such accident.

In every operation described in the text books the supporting ligaments and muscles—the arteries and veins—and even the entire cord, is sacrificed in exact proportion to the position of the gland in the canal—the descent it has made—and the distance it can be brought down after everything has been dissected away that retards the future descent of the gland without lessening its necessary blood supply.

Why would it not be good surgery—

and rational surgery—to open the canal in the usual manner, as described by Bevin's, and others—enlarge the internal ring—sharp dissect free the gland and its appendages so as to enable its being pushed—in toto—up through the internal ring—and allow it to rest—as it once did rest—inside the abdominal wall but outside of the peritoneum. We well know that at one time during the course of its embryological and foetal evolution from an intraabdominal to an extra abdominal organ that it rested, for a time at least, exactly where the surgeon has now placed it—just inside of the internal ring—out of harm's way so far as bruises from external violence is concerned—removed from the stricture and pain caused by the muscular contractions of the canal—away from the constant feeling and squeezing a patient in this condition usually gives it as a result of mental perturbation—in a position where it can functionate if it is so developed—and it can be placed in that position with the minimum amount of trauma—no pulling, or hauling, or scrubbing with rough gauze sponges, no cutting of, what may be to it, vital blood supply—no invasion of the peritoneal cavity—the peritoneal process simply being pushed up—with the gland and its appendages—until all are inside of the internal ring, after which the ring and canal are closed as an inguinal hernia is closed and with the assurance that there is left behind no traumatized or devitalized tissues to heighten the chances of infection and the undoing of the work.

I can cite my readers to no instances in which this operation has been performed. Our surgeons seem to prefer the beaten paths in this particular line of work, even though the odds for success are very much against the prevailing methods. It seems rational to me—after having assisted in and witnessed several operations for undescended testicle—operations brilliantly performed—worthy of success—but unsuccessful in one hundred per cent. of the cases it has been my privilege to witness—that an operation which would simply turn the process of evolution back on itself—just back to the point where the gland was an intra-abdominal but extraperitoneal body, and just before it had begun to brave the descent of the inguinal canal to its natural resting place, the scrotum.

If an operation of this sort could be done—and where are the obstacles—the gland would certainly be more secure from external violence in its new resting

place than in its exposed position in the canal, and certainly, protected by the abdominal wall, it would be much safer than in any other place outside of the scrotum. It would certainly continue to functionate—if it was ever capable of functioning, and no theory has ever been successfully advanced showing that a testicle could not functionate if it was intraabdominal, or even extra-scrotal.

The lack of trauma to the gland and surrounding tissue should advocate its trial. It would be interesting to read a really rational objection to such an operation. The chances for the life of the gland are certainly a hundred per cent. better than the lengthening methods now advocated—unless, possibly, that everything was absolutely most favorable to the descent of the testicle simply by the removal of some slight obstruction.

It is not absolutely indispensable to the happiness of the male genus homo that he feel two glands in his scrotum—almost any man could be satisfied to feel one and know that he has another resting safely just inside of his abdominal wall and out of reach of fingers that might squeeze too hard, and without having had to experience the morbidity usually attendant upon operations, together with the very considerable risk of castration from death of the gland, necessitating a second and not nearly so pleasant an operation and convalescence—together with the mental perturbation that would be his, knowing that he could probably never enter the ring for Rooseveltian honors as the producer of a large family—of his own.

Porter Building.

Operative Treatment of Fractures.†

By S. W. Hobson, M. D., Newport News, Va.

You will recall, perhaps, that some time ago I had the privilege of discussing before you in some detail the relative merits of the Operative and Non-Operative treatment of fractures.

Most of the closed, or simple fractures, are still and ought to be exempt from operation, but there are many which require operative procedure, and all open, or compound, fractures demand operation.

An analysis of the age groups taken from literature, discloses that there is a pronounced depreciation in the functional results of the Non-Operative treatment as age advances—that is to say, the older

the patient the worse the result. It is true, too, that the functional result may be good with an indifferent anatomical result, but the most certain way to obtain a good functional result is to secure a good anatomical result, and no method, whether Operative or Non-Operative which does not definitely promise a good anatomical result, should be accepted as the method of choice.

The operative treatment should not be regarded as a method to be employed only in consequence of the failure of Non-Operative treatment, as the results of the secondary compare very unfavorably with those of the primary operation.

The mortality due to operative treatment is so small that it can not be urged as a sufficient reason against it, but a considerable portion of the failures of operative measures are due to infection, a possibility which may occur even with the best technique, and it is necessary to insist that operative procedure requires skill and such facilities and surroundings as will insure asepsis. I can not emphasize too much the importance of a sterile technique; if necessary, several days may be expended in cleansing the parts. My observation has been, although I can find no confirmation in the literature of the subject, that bone tissue of all the tissues of the body is the most susceptible of infection. The majority of my infected cases have apparently been of a minor nature, in which sinuses developed emptying small quantities of sero-purulent fluid and occasionally fragments of bone; it is for this reason particularly that the later operation, done during the second week after the injury, offers the best prospects for a complete and uneventful recovery. Prior to the second week there is much effusion from irritation; the lymphatics are clogged with material being removed, and unfortunately from the trauma, much tissue is so injured that its resisting power is lowered. There are extravasated blood clots and coagulated lymph effused throughout the injured area. The normal drains are overworked and clogged, and the living tissues have not recovered their tone and blood supply so that the antibodies can find access to and destroy the invading bacteria. The ends of the bones have not gone through the process preparatory to repair; furthermore, during the period of delay the usual means of treating the fracture may be faithfully tried, and their failure demonstrate the necessity for operation. Some time during the second week is,

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therefore, the period of choice for the operation; at a later date nature's efforts at repair and the occurrence of contraction etc., might seriously interfere with the operation and subsequent treatment.

The incision should be appropriate, but preferably too long than to short, as much contusion of the surrounding tissues may be produced in manipulation. The principles of the operation consist in, (1) the removal of interposed tissue, such as muscle, fascia, fat, clots and fragments; (2) the thorough sterilization of the wound with Bi Chloride or Harrington's solution; (3) freshening of the ends of the bones, if necessary; (4) obtaining and maintaining apposition of the fragments. If these principles are carried out union is quite sure, provided the recuperative power is sufficient. It is not necessary to remove the fragments which are sufficiently attached for nutrition, nor even all sterile blood clots which in a measure might form a scaffolding for callus. If the fragments tend to remain in apposition, the wound may be closed with or without drainage and treated as a simple fracture; but if there is doubt as to the maintenance of the apposition, it is necessary to insure it by means of sutures, bone grafts, pegs, plates or nails. There seems much division of opinion as to this part of the technique. My own observation has been that the use of foreign bodies generally, and especially the plate now so theatrically done by everybody everywhere, should be the method of last resort, for the reason that its use is followed by a higher percentage of infection (Periostitis and Osteomyelitis) a higher percentage of non-union of mal-union, a higher percentage of exostoses and pain; furthermore, a second operation has to be done finally to remove the plate. It has been said that nature hates a void, and it is amply proven that she thoroughly loathes a foreign body, and makes war upon it continuously whenever it enters the body, until it is either removed, or else she isolates and encapsulates it like a bullet. The plate is easily applied and makes an excellent mechanical proposition, but it is no more physiological than a foreign body in the eye and quite analogous. I believe that in the course of five years the plate will be relegated to a very limited field of usefulness.

The following methods have given me the best results, they are predicated, however, upon the integrity of the external fixation apparatus which is de-

scribed later: First, absorbable sutures, and I have no hesitation in using them, with due deference to the contrary opinion of most leading surgeons, in many fractures of the long bones. It is not difficult nor unsafe to so manage the external apparatus that it will hold sufficiently firm for the rest of the time needed for union any fracture which has been delayed a week for operation and then held for twenty days with chromic gut. If I doubted the integrity of the absorbable sutures, my second method of choice is the bronze copper wire; this suture is smaller than silver wire, its tensile strength is greater, and furthermore, it can be tied making a firm mechanical juncture, unlike silver wire which has to be twisted. The bronze copper wire suture is so small that nature is able to isolate and encapsulate it as the simplest method of making war upon it as a foreign body. In oblique fractures only two through and through sutures are used, being tied upon opposite sides; in direct fractures two through and through sutures may be used, one anteriorly and the other laterally; or four may be used extending only into the medullary canal. Recognizing that copper wire is a foreign body, I believe it to be unwise to use very much of it, and that it is advisable to suture additional fragments with gut.

My third choice is the autogenous bone graft, especially where there is much loss of bone structure paralleled by a sound bone—like the Radius or Ulnar. This method consists in the resection of a segment of bone from two to five or six inches in length and 1-4 or 1-3 of an inch in width, extending through the periosteum to the medullary canal from the upper fragment of the long bone and its transplantation between the two fragments into a similarly cut groove into the lower fragment or vice versa; it may be sutured into position with gut, and the operation can be done with ordinary drills and chisels. I have had no experience with autogenous pegs or nails, but have seen good reports from them. I am unable to say whether this implanted fragment grows or merely acts as a scaffolding to be replaced by osseous material supplied by the ends of the bone, but I may say it is simple and preferable to foreign bodies, generally speaking. There may still be some differences of opinion upon the subject, but it has been demonstrated quite clearly that the periosteum has no osteogenetic property, except to the extent that osteoblasts underly it; it

is needless, therefore to transplant it. Clinically, the presence or absence of periosteum does not in the slightest alter my operative procedure.

The external fixation apparatus is most highly important regardless of any method of operation, for it is capable of the greatest deceit and the greatest harm. There is a variety of splinting material in the market and each has its attractive features, but it is safe to say that none is trustworthy for the reason that there is a difference of from 15 to 40 per cent. between the maximum and minimum circumference of an injured limb during treatment, then, too, the muscles will move the fragments some—they can not be and ought not to be paralyzed. When the fixation apparatus is removed, swelling and more or less of complete loss of function follows, which requires a variable length of time for its restoration. It is not infrequent that from 50 per cent. to 75 per cent. of the loss of time from work is spent in the restoration of function; this loss of time is a matter of considerable importance in corporation surgery, not only to the individual but the corporation as well, for the adjustment of the damage claim is largely based upon the loss of time. Moral—don't lose function. The fundamental principle of the external apparatus, therefore, lies in its removability and its adjustability.

My practice is to remove the apparatus from my patients frequently from the beginning, some every day, some every other day, all at least twice a week. If plaster of Paris is used, it is cut with this end in view. The apparatus is kept off ten to fifteen minutes each time, the limb massaged and passively moved with discretion so that the normal physiological blood supply and nerve tone to the injured parts may be maintained.

The result logically follows that there is a minimum of anatomical defect that might result from the concealment afforded by a longer standing apparatus, a minimum of non-union or mal-union, for the juncture has been well and physiologically nourished, and a minimum of loss of function to be restored.

The apparatus is removed permanently early, and these patients are required to come to my office and exercise the limbs in my presence. There is obviously more or less pain involved in early exercise, and patients can not be trusted to do so at home. They are then given light work until they are able to resume their original duties. The deduction from my observation is a plea for harder work by the

surgeons and more along physiological lines.

Wertheim's Clinic in Vienna, Austria.

By Dr. L. C. Fischer, Atlanta, Ga.

One from our side is not only impressed with the wonderful clinics and great amount of work to be seen in Europe but also with the general conditions.

I spent a week in Berne, Switzerland, to see Dr. Theodore Cocher's wonderful operations on goitres. After a visit there of several days in a city of forty thousand people, one naturally expects when he reaches Vienna, a city of two million two hundred thousand, that the clinics will be better, larger, and that the work will surpass anything that could be done in a small city the size of Berne. Then, too, after dreaming for years of the advantages to be obtained in attending the clinics in Europe, you naturally expect great things. It would be unfair to make a comparison of the work in the two clinics in a paper like this, as the wonderful work of Cocher stands alone and incomparable with anything that it has been my pleasure to witness.

After two days travel from Berne, we reached Vienna on the 8th of July on a dark rainy night. After trying for some minutes to convince the customs officer in a language that was entirely foreign to my ability, that we were not trying to smuggle into the city any tobacco, whiskey or things to eat, we were finally allowed to take a taxi for our hotel. The chauffeur drove as a madman; we had not expected to go on the left hand side of the street so were not prepared to be driven through the crowds in a city of this size on the wrong side and at the rate of thirty miles an hour on a night like that with the streets slippery and dangerous looking. It was the least bit disconcerting to turn corners on two wheels in a car so powerful that its speed seemed to us to be limited only by its power to go. We found much to our consternation that we were in a Fiat car similar to the ones we had seen spin around saucer-like tracks at ninety miles an hour; so that it was with great relief that we reached our hotel safely.

One is impressed with the attempts of these people to be kind and considerate. Even though you cannot understand them, nor they you, they are constantly bowing and smiling to convince you, or to try, in their way, that you are welcome.

My first business was to cash a check into Austrian money. Imagine my dismay when the clerk gave me a pocketful of silver and paper for twenty dollars, and then in the course of a few minutes looked me up to say that he had only given me half enough. But after taking our first meal, which was dinner, we found out that to live in Vienna we had only enough for practically one day. I was told by different friends that living in Vienna was a great deal cheaper than in the States. While this is true if you would care to accept the accommodations offered, yet to live as you are accustomed to it will cost as much or more than to live in New York. In addition to paying an exorbitant price for our dinner, we had to tip three men before leaving the dining room; first, the head waiter, who does the bowing and takes the order; then the waiter who presents the meal; and, finally, the man who clears the table. But with all these the tips amounted to about the same as you would pay your waiter in a first class restaurant or hotel in the States.

The following morning with full instructions, I started out to locate the offices of the American Medical Association of Vienna. Was told that with little trouble I could walk; but after going for practically half an hour in what seemed the direction given, came back to the hotel from which I had started. I realized then that the city was built in a circle. There is what is called the outer and inner rings; the old aristocratic and administrative parts are in the inner ring and the newer and more modern sections surrounded the outer. After walking for a long time, decided to take a cab giving the driver the same instructions as I had. Finally after a long drive, we drew up in front of a very dilapidated building at 28 Schlossalgossa. Imagine yourself a perfectly innocent and unsuspecting American doctor in a foreign land looking for a street with such a name. I found here that, in addition to paying the cabman his regular fare, you were required to pay a tip according to a register, which amounted to 15 per cent. of your cab fare. Ascending a dark winding flight of stairs to a loft, I found a door marked A. M. A. Having been from home so long, and not having seen anything familiar, this looked good even in the place that it was. Entering, found three dark, dismal dirty rooms occupied by American doctors. In a short while met many friends from the States and some from Atlanta, so was soon conveniently located in the Ameri-

can Pension where numerous American physicians, and their families in many cases, were stopping.

The first afternoon we went for a walk to locate what I supposed would be the wonderful Krankenhaus (hospital). After walking for blocks along Alserstrassa and much further than we had been instructed, I appealed to an officer to direct me to the hospital. He explained to us that the building along the side of which we had walked for two blocks was the place. Such an old dilapidated building with very small windows that looked as though they had been washed not over a year ago, surprised me very much. It is built of brick covered over with cement and was for the most part two stories high, in places only one. As a whole, it was the most dilapidated looking structure I had seen since leaving the ancient city of Rome. Along the side walls were numerous bill boards, lively stable signs and such things as had caused us to believe that the place was really a livery stable.

The following morning, however, when we started out to attend the clinic, found that this was really the hospital of the Medical Department of Vienna; that in these old buildings such men as Von Eiselburg, Lorenz, Wertheim, and Shauta had and still were working. The old gates that admit you remind one very much of the gates to an ancient walled city. Entering these, you are suddenly awakened from the depression that hangs over you from going into such a dismal looking place by the beautiful flower gardens, delightful restful looking shade trees, with paths that wind and wind, with numerous and inviting seats or benches at every turn, with great crowds of convalescent patients walking, sitting or rolling around in the sunshine or resting in the shade, enjoying the beauties of such a world and gardens as we are not used to. This made us realize more than anything the wonderful work that is done here. Among the convalescents we saw some with scars from goitre operations, others with a rebuilt nose, a worked over leg or arm, and numerous faces painted various colors for the many skin diseases these people have. I promptly decided that if one wished to study skin troubles this was indeed the mecca. Passing along many walk ways, isles and corridors we came to the operating rooms of men about whom I had read for years. It seemed to me at the time that I was to realize one of the fondest hopes of my life in that this opportunity had been pre-

sented to me to work in what is one of the greatest clinics in the world. Went through the morgue where ten autopsies were held that morning; then, incidentally, passed the little chapel from which they bury their dead—for be it known they have some few to die. Finally, after walking for blocks, we came to a beautiful new building recently completed for Drs. Wertheim and Schauta. The buildings, operating rooms, and wards are the same in both cases. You are told, however, as soon as you enter this new part of the hospital that there is great rivalry between the two clinics; that they work directly against each other; that both claim to have the best operations for everything.

One is certainly impressed upon entering these clinics with the great differences, not only in operations but in technique. The operating rooms are some of the most beautiful that it has been my pleasure to see; the light in both is perfect; a unique scheme for keeping the temperature of the room as desired is their method of running ice or warm water down the side walls. This is accomplished by pipes running through the wall with a spraying apparatus attached, and ice water in summer time circulating through these. When the temperature is greater than is comfortable, the ice water is turned on and allowed to trickle down the side walls as long as necessary. The floors are all of terrazzo; the side walls and ceilings white porcelain, sterilizing and dressing rooms adjoining. In all cases the sterilizing of dressings, water, etc., is done in the basement or the apparatus in the sterilizing room is heated with steam generated below. With all of these arrangements the same, the differences in the operations, the general conduct of the clinics, their assistants, etc., are very interesting.

In Schauta's clinic, for instance, the operator and all assistants wear gloves, long sleeved gowns, masks, white shoes and operating suits. In no case is an assistant or a nurse allowed in the operating department until he has changed his street clothes. The visiting physicians are allowed to stand behind a railing where they can not get in the way of the operator or his staff. Then, too, one is impressed with the seriousness and dignity of the operator. When Dr. Schauta enters, the assistants and nurses stand at attention until he recognizes them, the same as though he were some great military authority.

In Wertheim's clinic it is entirely dif-

ferent. The operator nor his assistants change their street clothes, often not removing collar or tie. After removing the top coat and rolling up the sleeves, they scrub up. The assistants as a rule wear short sleeved gowns, no gloves, nor mask. Dr. Wertheim did not dignify us by wearing gloves, mask or a regular gown, only an apron similar to that worn by workmen or laborers, covering only the front of the chest, and extending down over the trousers. His street shirt sleeves came down as low as the elbow and were not covered with anything sterile. He did not even wear a cap. Their reports, however, show that their infections are nil. While one takes this "*cum granum salis*," the same as many other statistical reports, if it be true; then we do a great many things that are useless. It is strange to say that there is not a trained nurse in Vienna other than those who are trained for the operating rooms. They are all known as experienced nurses, and serve in the hospital for a number of years. They must serve three years before they can enter the operating department. Each man as a rule trains his own operating nurse, when she is to him a most valuable asset. The best that I have ever seen is in Dr. Wertheim's clinic. Never does he have to ask for an instrument, sponge or ligature. After working for him for years, she anticipates his every want and movement. Should she make a mistake and not be ready with things he may require, the correction that she receives is couched in such terms that it embarrassed one to listen.

The patients are all brought into the operating room and placed on the table awake. In few cases do they give a general anesthetic, using almost entirely spinal or local anesthesia. When the patient is placed on the table, he is strapped so that it would be practically impossible to move, even though when not anesthetized. They believe very much in the use of iodine. The abdomen is scrubbed with soap and water, using a fine wood fibre something similar to excelsior instead of a brush or gauze. After this the entire abdomen from the ziphoid appendix down to the os pubis is painted with 7 per cent. iodine, this extending for at least six or eight inches over the thigh. When perineal work is done, the entire area including the nates and the under side of the thighs is likewise painted. The most complete array of instruments and suture materials are always present. They use in Wertheim's clinic silk or linen, while

in Schauta's cat gut is mostly usually used.

In this clinic all of the various gynecological operations were done; but the ones in which I was the most interested were the complete extirpation of the uterus for malignancy and Wertheim's interposition operation for Procidentia. In all cases for abdominal work the patient is placed in a Trendelenburg position; the incisions are usually made through one or the other recti muscles. In all cases for malignancy, after the abdomen was opened, the parietal peritoneum was stitched to the skin, thus not only taking up any redundancy of the bladder, but preventing the possibility of the malignant tissue, should such be exposed, from coming into contact with the incision. The operation from this point on is where they claim so much better results than we are able to show. Their statistics for years far surpass anything that we are able to establish. With the uterus firmly held by the assistant, the first step is to ligate the ovarian arteries on each side including the tubes and round ligaments, cutting these with a clamp on the uterine side; this makes it possible between the two folds of the broad ligaments to expose the ureters; then dissecting the bladder loose (anteriorly,) it is separated down to the anterior vaginal wall. The ureters are followed down to their insertion into the base of the bladder, thus exposing the pelvic perimetrium, which is dissected out freely without danger of cutting the ureters as they are held aside by either gauze packing or an assistant. Posteriorly, the (peritoneum) is dissected loose, exposing the vagina in almost its entire length. Applying two clamps which are fixed well below the cervix, the vagina is divided between them leaving as much as one or two inches of the vagina. With this broad area of the peritoneum dissected up, they follow the ureters back up to their exit from the pelvis, following along the courses of the lymphatic chains up to the obturator foramina, from which they remove all lymphatic glands in the event they are enlarged. The dissection is most thorough. The wound is closed in the usual way, using entirely silk or linen for both ligatures and suture material. A drain is left in the vagina but not extending into the peritoneal cavity.

Their statistics show from this operation that they lose 12 per cent. primarily; that 34 per cent. either have a recurrence or die from some other condition before two years; that 54 per cent. are living after five years; and that they have

ureteral fistulae in 18 per cent. They claim to have not had any bad after effects from local anesthesia in four hundred cases.

In Schauta's clinic all hysterectomies are done by the vaginal route; especially is this true for malignancy. In his operations the tubes and ovaries are usually left. They claim to have less than 3 per cent. primary mortality; that 63 per cent. recur or the patient dies from some other cause within two years; that 34 per cent. are living after five years; and that they have no bladder or uterine complications.

The great number of operations done for malignancies was indeed appalling. It was very seldom that I did not see from one to three done in either one or both clinics every day. They explained to me that they were having an unusual number.

I was forcibly impressed with the fact that cancer is much more prevalent in Europe than in America.

25 E. Linden Ave.

Bile Tract Infections.*

By John A. Patterson, M. D., Concord, N. C.

In order to understand and appreciate the subject of bile tract infection we will briefly run over the anatomy and physiology of the liver. As is well known the liver is the largest gland in the body and lies in the right upper hypochondriac region and extends across the epigastrium into the left hypochondriac region. It is closely adopted to the vault of the diaphragm, and its relation with the anterior wall of the abdomen on the right side as far down as the ribs. The gall bladder lies to the anterior border of the right rectus muscle at the level of the inner edge of the ninth costal cartilage.

The common bile duct in passing from the liver passes through the head of the pancreas in about 62 per cent. of the cases; also the common bile duct and pancreatic duct enters the duodenum together in about 62 per cent. of the cases.

The nervous supply of the liver is sympathetic. Edgeworth claims that the Vagus assists in innervation. The liver is not very sensitive to pain and the most sensitive part is around the region of the common bile duct, about the neck of the gall bladder, due to the fact that this area is supplied by the 11th and 12th dorsal nerves. These also supply the diaphragm. This, probably accounts for the fact that there is a spasmodic condi-

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tion of the diaphragm associated with bile tract, infection or gall stone colic.

The liver in health has three well established functions, and any of these functions, when not working in harmony, may throw the entire system out of order to a certain extent. First, the glycogenic function, or that function which has to do with carbohydrate metabolism; 2nd, that of converting certain nitrogenous bodies into urea; 3rd, the production of bile.

The Portal veins collecting as it does the Venous blood from the viscera of digestion enters the liver and ramifies throughout its substance in the manner of an artery and ends in capillaries. Now the liver acting as a filter for the Portal system receives the greater amount of bacteria and toxins elaborated in inflammatory conditions in areas drained by this system. Hence any infection in the gastro intestinal canal is liable to cause the bile track infection. In addition to the Portal route infection may travel to the liver through the Hepatic artery, Lymph channels, common bile duct and probably through the peritoncum. The most plausible and the one established by clinical observation is that by the Portal route.

The etiology of bile tract infection is thus in the majority of cases due to some inflammatory or infective agent in the gastro intestinal canal. The inflamed or gangrenous appendix nearly always produces some bile tract infection and this should be constantly borne in mind.

A very interesting case came to our hospital about one year ago and the only history worthy of note that we were able to illicit from her, was that on several previous occasions she had had several attacks which she called colic—or rather thought to be colic—but she had always suffered with pain and tenderness over the appendix, and this was followed by soreness and tenderness over her liver, which usually lasted some few days. During and after these attacks she was somewhat constipated and jaundiced. When the patient entered our hospital she had had this attack for two days and was in a very weak condition. Her urine was loaded albumen cast and contained great amount of bile. A mass could be distinctly mapped out over her appendix, which was very tender, she also suffered with marked tenderness over her liver and was jaundiced. She was prepared for an operation and when put on the operating table her pulse could scarcely be felt. A very small

amount of anesthetic was necessary, owing to the weak condition of the patient. On opening the abdomen there was a gush—so to speak—of browish dark colored fluid. A gangrenous appendix was found, which had ruptured. This was drained. Patient was put to bed in the Fowlers condition, given saline solution, and in a few days her jaundice began to disappear, as well as the tenderness over the liver. It was only a few weeks until she was dismissed from the hospital apparently well. I sight this case to show what bearing a gangrenous or inflamed appendix will have on the bile tract and how infection travels and will be relieved on the removal of the focus of the infection.

Bile tract infection is a very common sequence of typhoid fever, and while there is not in every case enough symptoms to produce a typical bile tract infection, yet in a majority of cases there is some enlargement of the liver associated with icterus.

At the time I was resident physician, there was a boy about twelve years of age admitted to the hospital who had a very severe case of typhoid, he made a rather slow recovery. In the declining stage of the disease there came marked tenderness over the region of the gall bladder and tenderness over the liver with some enlargement and was diagnosed as a hepatic abscess. An operation was performed, and, instead of an abscess, there was found an enlarged liver—gall bladder was filled with viscid mucus material which was drained. The liver was punctured several times with a blunt instrument. After this the patient made an uneventful and rapid recovery.

The typhoid bacilli may lie in the bile passage for a long time, as shown by one of Mr. Monyinhon's cases in which they were shown seven years after an attack of typhoid. They are also found in gall stones years after typhoid fever, and this is probably one of the causes of the so-called typhoid carriers. In the liver they lodge in the Portal radicles. The gland is usually enlarged and tender. And this together, with pain and tenderness, in hepatic region with a previous history of typhoid fever and this attended by chills and fever are very suggestive. While remembering the causes mentioned above, do not forget to take in consideration piles, fissures, fistulos, diarrheas, ulcers all sizes, shapes and location where there are good, bad or indifferent, so they are in the gastro intestinal tract drained

by the Portal circulation. Here I might mention the fact that an infection of the primary and the sole causes of gall-stone—and in speaking of gall-stone we should speak of them as symptoms and not as a disease, and that they are a result of a bile tract infection. The function of the gall-bladder has never been determined. It is only a cess pool, and it is in this cess pool that gall-stone forms, and as long as we have the infection and the gall-bladder so long do we have gall-stone.

Pain and discomfort, coming on after meals, lasting two or three hours, accompanied by jaundice, is rather suggestive. You may have a patient with chills coming on at certain times each day the malarial organism may fail to be found, urine negative, tenderness over the gall-bladder with some slight jaundice should be proof of bile tract infection.

The location, direction and radiation of pain produced by pressure will frequently help to differentiate gall-bladder pain from those of the kidney duodenum or stomach. If the gall-bladder is inflamed pressure over it will cause pain in the right shoulder and epigastrium to right of medium line. While in other diseases, mentioned above, pain will appear in their respective areas. Pain due to obstruction of common bile duct may be referred to anterior surface of chest fourth to sixth intercostal cartilages on the left. According to Hall, this pain located in the cardiac region has been mistaken for angina pectoris.

Bile tract infection and pancreatic diseases are hard and can not always be differentiated. Owing to the close relation and to the fact that the common bile duct passes through the head of the pancreas in about 62 per cent. of the cases. Acute pancreatic diseases are always accompanied by some shock—bile tract diseases not. In pancreatic disease there is always a rapid pulse; while in bile tract infection and bile tract infection alone gives very slow pulse.

Jaundice is determined by finding bile in the urine. Another very instructive way is to press down on the lower lip with a glass and in jaundice lips will be yellow, and in case of anemia lips will look pale. There may be jaundice in pneumonia, owing to the fact that in breathing when in good health the diaphragm is lowered and raised with each respiration and hastens the bile in its passage. But in the case of pneumonia with consolidation these move-

ments are retarded and the bile is allowed to stagnate and is taken up by the system.

In regard to the treatment, I will say with few exceptions, that every case of gall-bladder trouble and bile tract infection begins as a medical case. There may be so mild that the real nature of the disease is overlooked. There is no question that a large number of mild cases recover rapidly. The treatment of acute cases, where jaundice is subsiding, and where an operation cannot be performed is complete rest in bed, wash out the stomach warm compresses over the gall-bladder and liver. For the nausea and vomiting nothing is much better than a few drops of chloroform given in crushed ice. No effort at feeding should be undertaken until all nausea and pain has subsided. We no longer expect to get rid of gall-stones by medical treatment, although some have claimed to do this by drinking olive oil in large amounts, and seeing them pass in the stool, which, if they would examine closely, is not gall-stone but concretions caused by the saponification of the oil in the intestines. No internal medication will dissolve a gall-stone.

The object of medical treatment is not to cure or remove gall-stones but to transform the patient from a gall-stone sufferer to a gall-stone carrier, and it is often necessary to treat the organs affected by this as for instance a diseased stomach.

Patients should have complete rest, dietetic regulation, mineral waters and drugs. Among local measures we might mention ice bag, colonic irrigation, prohibit fruits of any kind, give lime water, soups and gruel, milk or toast. Owing to the fact that digestion hastens passage of bile from the gall-bladder, patients should be fed frequently. Mineral water should be given freely, and sodium phosphate should be given before meals, as they are supposed to stimulate the flow of bile.

Operation affords the only means of a permanent anatomical as well as a clinical cure. Operate early as it prevents complications, it is safe, it is sure, it is conservative and will lengthen and save life.

Some Pediatrics Advances.*

By Lewis W. Elias, M. D., Asheville, N. C.

In few departments of medicine are there so many new and conflicting views being constantly advanced as in Pediatrics. The object of this paper is to briefly discuss a few which in the writer's opinion are really useful advances.

The most brilliant discovery in recent years was that of antimeningitis serum, by Flexner, almost rivalling in importance the effects of diphtheria antitoxin. It has reversed the death rate of eighty per cent. to eighty per cent. of cures. This is too well known to need discussion beyond mentioning that it should be given by the gravity method, the blood-pressure being watched throughout the administration, which is to be discontinued whenever there is a drop of about fifteen.

Of no practical value yet, but of great significance as a forward step, is the discovery, also by Flexner, of the specific organism causing poliomyelitis.

The Bordet-Gengou bacillus has been pretty generally accepted as the causative agent in pertussis. The vaccine made from these germs has had little effect in curing the disease; but is of some value as a prophylactic for exposed cases, as shown by the experience of Hess in New York.

Inclusion bodies in scarlatina as means of diagnosis are yet under discussion. And the considerable work on measles has, as yet, resulted in no practical helpfulness to the general practitioner.

In 1902, a baby was seen in Boston by Putnam, Roach and Cabot, who, after careful study of the case, were unable to make a diagnosis. The autopsy showed kidney infection, a condition which was not even examined for during life. In commenting upon this Cabot says that at that time no one knew of this frequent trouble in children. Now, any baby running a high, irregular fever, and showing no other cause, is immediately suspected of having either an infection of the middle ear or of the kidney, especially the latter if a girl.

Salvarsan never reached the high-water mark in children that it did in the adult, largely because of the difficulty attending its administration. The technic has recently been improved by Holt and Brown, who give infants concentrated solutions of salvarsan in the veins of the scalp with safety and ease, and

with the same brilliant results that attend its use in the adult. The profession has not taken up its use very largely, claiming that mercury is quite sufficient, save in very exceptional cases. This seems a little inconsistent, if we admit its use in the adult. Syphilis is far more serious in the infant, owing to the lack of resistance, difficult feeding, etc., than in the adult. Therefore, salvarsan, if useful in medicine at all, is preeminently so in infants. Certainly the earlier and more thoroughly we control the disease, the better the results. This can best be accomplished by the combined use of salvarsan and mercury. All cases are entitled to this, at least to begin with. In a few desperate cases, salvarsan will undoubtedly prove a life-saving remedy. Such was a case that I recently reported, where an apparently hopeless baby was changed in less than a week, following the neo-salvarsan injection, into a fairly normal infant.

Diphtheria is no new disease, nor is its treatment, but there is a fascinating interest about it which is continually turning up new and valuable points. Very recently Von Behring has attempted active immunization with a mixture of toxins and antitoxins. So far the results are but slightly encouraging. A real advance is Schick's test. He employs a solution of diphtheria toxin, of which 1-10 of a c.c. equals 1-50 of the minimal lethal dose for a guinea pig. This injected into the skin will show, by a positive local reaction, the absence of natural antitoxin in the system. If the reaction is negative, this demonstrates the presence in the system of sufficient antitoxin to insure the exposed individual against diphtheria. Park says that he has seen no case giving a negative Schick reaction who has later developed diphtheria. This should be of much use, as well as of considerable satisfaction, in determining susceptible individuals; also a great saving of antitoxin used for passive immunity, since extensive tests make it probable that at least one-half of all children have, already, sufficient natural antitoxin to protect them.

The drift of opinion is rapidly approaching the large single dose of antitoxin; the size of the dose depending upon the severity of the disease, and upon its duration. Pretty universally, by the best men, it is being felt that an average dose early in the disease for a mild case is 10,000 units. Few give less than this under any conditions. In serious cases, or late in the disease, several times the

*Read before the Buncombe County Medical Society, September 21, 1914.

size of this dose is given. All authorities agree that desperate cases should have antitoxin intravenously. Park believes that 10,000 units intravenously are equal to 100,000 subcutaneously. Again I will call attention to the fact that the veins of the scalp, in infants under two years of age, offer the same easy approach to the general circulation as in syphilis.

The immunizing dose is also being enlarged. I have had two cases in children where doses of 2,000 and 2,500 units were followed by diphtheria in seven to ten days; so I am in sympathy with the feeling that 1,000 units are not always protective, and that probably 5,000 units in the adult will come nearer securing the absolute protection which we wish.

Again the text books say, "Put the antitoxin under the skin where it is loose." Park has shown that from the subcutaneous tissues absorption takes place slowly, so that the maximum amount of antitoxin is not found in the blood before the fourth or fifth day. From the muscles absorption is more rapid; and, what is further worth remembering, it is far less painful here than under the skin. From all considerations, the ideal method for general use in giving antitoxin is the intramuscular injection.

When we come to infant feeding we are dealing with by far the most important part of pediatrics; also we enter the realm of greatest theory and speculation. Here it is that we find the most difficulty in deciding between what is merely new and what is a real advance. Yet here such a choice is most imperative, from the fundamental nature of the subject. We may differ never so widely on all sorts of drugs, and the patient may still come out fairly well; but food for a sick baby is both a food and medicine. A false step here leads twice as far astray, with proportionate damage to the baby.

After wandering far afield, and trying out all sorts of highly complex formulae, the tendency now sets strongly toward the simplest modification of cow's milk that can be made to meet the needs of the individual baby.

From all the experiments and testings of food elements, and fractions thereof, and varied combinations of the same, the following facts are fairly established.

First, and most radical of all, we have found how harmless is proteid, the element which we were all taught to fear, and against which we were carefully trained in erecting defenses. The fact is that only a few years ago infant feeding was largely made up of adjustments of

cow's milk so that the baby could manage the proteid. Now, it seems entirely established that the proteid is of all the elements most negligible; in fact, very seldom causing any trouble at all.

As to fats, there has been a decided decrease in the amounts used. Practically no one now tries to make a healthy baby take over four per cent. The fat is always to be sharply reduced in disease. Particularly in diarrhoea, fat digestion reaches a very low ebb, and is only slowly regained, so that one of our greatest efforts is the long struggle to get children safely back upon fats, following summer diarrhoea. In the occasional infant who has trouble with breast milk fat, we sometimes find a most stubborn problem in trying to adjust the fat to the baby's capacity, and then to work up the baby's digestive strength to the normal for fat. One practical point to remember in this connection is, that the longer the interval between nursings the less the fat. Here we might also note the somewhat recently established fact, that the small curds found in the stools are almost always composed of fat and not of proteid, as was formerly supposed. These curds now call for a reduction and re-adjustment of the fats, where previously we used whey and other proteid modifications.

Formerly sugar was held to be present in uniform amounts in milk, and very little disturbance was expected from it; but recently the German pediatricians have laid a great deal of stress on what they term "food injuries," which they attribute largely to sugar, and which are manifested in various digestive disturbances, even including acute diarrhoea with fever. That sugar is the cause so frequently as is claimed, has not been proven; but that much, formerly unsuspected, damage can be caused is quite clear. Two types of injury from carbohydrates are illustrated by the following two cases seen recently.

Case 1.—Baby M., one year old, poorly nourished. No food had ever thoroughly agreed with it; proprietary foods seemed especially injurious. There were frequent attacks of high fever and diarrhoea. The baby was comparatively well for only short periods. In the light of this history, a food low in sugar seemed indicated, and *eiwiss milch* was used. The indigestion and fretful disposition both improved rapidly. Malt sugar and toast were gradually introduced. All went so well that the rate of sugar increase was hastened. This resulted in a sharp attack

of diarrhoea, with fever up to 103, and great prostration. The condition was met by removing all carbohydrates, and in two days the fever and bowels were normal again. Having learned the exact amount of sugar which constituted the baby's danger line, the case was carried on successfully without further interruption.

Case 11.—Illustrates the starch indigestion. Baby C. was normal up to 18 months of age, when she had a mild attack of summer diarrhoea. As this subsided under the usual treatment, to the *eiwiss milch* was added sugar in small amounts, but starches, in the form of toast, crackers and cereals, were allowed in rather large quantities. Under this treatment the baby improved rapidly, then she stopped gaining, grew fretful, appetite failed, and she slept very poorly; the bowels moved about once daily, but the stools were foul and mushy. As all fever was gone and she had been free of diarrhoea for a month, and the movements showed no evidence of intestinal inflammation, the diet was changed to one of meat broth, scraped meat, and milk with the fat reduced to three per cent., all other foods being omitted. She refused this diet at first, but the pangs of hunger were too much for her, and within a few days after beginning this new diet the baby was in the best of spirits, sleeping all night quietly, drinking her milk ravenously, and has gained steadily ever since. She did so perfectly that for two months nothing was added; recently it was felt safe to enlarge the dietary, and she is going back to the usual food for her age, with uninterrupted improvement.

Recent work done by Dr. Roy Blosser, of Atlanta, upon dogs, seems to show that the most harmful part of sugar is in the non-crystallizable substances. Granulated sugar fed in appropriate amounts caused no trouble; while sugar containing the non-crystallizable substances produced various disturbances, and finally death. This latter sugar is the kind used by bakers and confectioners, and probably explains some of the harmful effects of candy on children.

The role of the salts in infant feeding has been widely investigated, with very few results, beyond the conviction that they probably play an important part in digestion; but just what this is, and how to control it is as yet practically unknown.

As to new food formulæ: the most distinct advance that has been made in

recent times, in this line, is found in *eiwiss milch*, devised by Finkelstein to reduce the sugar content of milk. It is made from butter milk, and casein freed from the whey. This gives the usual amount of proteid, a slight reduction in the fat, and brings the sugar down from $4\frac{1}{2}$ to $1\frac{1}{2}$ per cent. The sweet taste may be supplied by saccharin, although, at best, it is unpalatable, and the baby must usually be starved into taking it. The great advantage in this preparation is that it seems almost never to irritate the intestinal tract, and is useful as an introductory course for feeding cases, in order to clear up such digestive disturbances as vomiting and diarrhoea. Because it is so bland, and at the same time a fairly nourishing food, it has marked one of the most distinct modern advances in treating summer diarrhoea. By its use we are saved the usual starvation period of a week or more. Thus the baby's resistance is maintained, and the case recovers sooner, and in much better condition. I have seen nothing but good come from its use in summer diarrhoea.

As to recent diagnostic points in feeding cases: one which is being much used, and which is of great service, at least in convincing the mother, is weighing the breast-fed baby before and after nursing, to determine the exact amount of milk obtained each time.

A case illustrating this, was a six weeks old baby who had cried almost constantly since birth. It gnawed its fingers ravenously, and seemed never satisfied. This, as usual, was interpreted to mean hunger. The nursings were reduced from every two hours to every hour and a half, then to every hour, and to this was added a proprietary food, still without satisfying the baby. When seen the baby was having 8 or 10 movements a day with curds, and vomiting large amounts after each nursing, and crying continually. Putting the baby on a nursing schedule of every three hours, five minutes at a time, worked a vast change in its comfort. It was found by weighing that the baby got $2\frac{1}{2}$ ounces after nursing four minutes; longer nursings than 5 minutes could not be retained. It was not necessary to weigh after the 20 minutes it had formerly nursed in order to convince the mother that the baby was not crying from hunger.

The important subject of training and control of children cannot be gone into here.

In closing I think that I can best

illustrate the help which modern advances in pediatrics have secured for babies by referring you to the mortality among babies in New York City now, and thirty years ago. The former death rate was about 288 per 1,000 born, as compared with the modern rate of 100. In other words, about 2-3 of the New York babies are saved today that would have died a generation ago.

Conclusions from one Year's Experiences with Dr. Von Ruck's Vaccine Against Tuberculosis.*

By Roswell Elmore Flack, Spray, N. C.

About one year ago, the Department of welfare and Health, at Spray, N. C., introduced Dr. Karl von Ruck's vaccine (1) against tuberculosis, into its work, both as a therapeutic and as a prophylactic agent. Before the Rockingham County Medical Society, last April, I reported on my experiences in 314 cases, treated with this vaccine (2); since then 176 further cases have been treated by me, making a total of 490 cases. Divided into classes according to the physical findings and symptoms, these cases may be grouped as follows:

Early Cases	272 v. Pirq. Post. in 100 per cent
Mod. Adv.	122 v. Pirq. Post. in 100 per cent
Advanced	31 v. Pirq. Post. in 100 per cent
Prophylactic	65 v. Pirq. Post. in 77 per cent

The time which has elapsed since the conclusion of the treatment is too short to say that a permanent cure was effected in any of the cases treated, but from the physical findings after treatment together with the disappearance of troublesome symptoms, with the gain in weight and the general well-being of the patients, one is led to believe that, at least, in many of them the results are permanent. Of the early cases all were apparently cured. Of the moderately advanced, over one-half were apparently cured; all were greatly benefitted, as they experienced a gain in weight, are practically free from cough and expectoration and feel better generally. Of the advanced cases the troublesome symptoms were ameliorated in all with one exception; appetite and digestion improved; from five to fourteen pounds in weight were gained by several, and, on re-examination at the conclusion

of the treatment, the lungs showed clearing up to a remarkable degree in four patients.

Families of children have received the vaccine for prophylactic purposes. Among these children some were subject to frequent colds; since the treatment, scarcely one of them has had a cold worth mentioning. The vaccine was just as efficacious in adults suffering from colds and catarrhal conditions. These people reported that they were practically free from colds and that their catarrh was much less troublesome.

The large number of early cases treated is explained by the conditions of my work. By far the majority of persons that come to my office are mill operatives, able to do a full day's work, and come to me "to see if anything was wrong" or because they are "not just feeling right." The office is near the mills and the foremen excuse the operatives if they desire to consult me. The first patient, who was treated with vaccine, felt so much more fit for work, that he told his neighbor, and in this way I had an opportunity of examining a great number of working men and women who were in comparatively good health but who benefitted from prophylactic or therapeutic administrations of the vaccine because they were evidently infected and often had latent tuberculosis, giving rise to those ill-defined symptoms the effect of which was described as "not just feeling right."

The cases which I am reporting at this time are as interesting and convincing as those reported last April. The gain in weight was just as striking and the examination showed in most instances that the lungs had cleared up satisfactorily. I refrain from reporting a large number of cases in detail, but will describe one case for each of the groups of tuberculous adenitis, moderately advanced pulmonary tuberculosis and so-called surgical tuberculosis.

Case 1.—Baby, 18 months old, male. May 14, 1914. Was brought to me for examination; said to suffer from indigestion; was unable to sit up, to stand up or to walk. The baby was fed on raw cow's milk. Weight 15 lbs. Temperature, 100 degrees Fahrenheit.

Examination disclosed a poorly nourished baby, pale and anemic. Multiple glandular enlargements of cervicals, axillaries, inguinals. The cervicals were so large that they were noticeable on inspection. The apices of both lungs showed infiltration.

*Read before the Eighth District Medical Society, Winston-Salem, N. C., December 1, 1914.

For the first three or four treatments, the doses of vaccine were small, on account of the temperature; after the initial treatments, the ordinary doses, suitable for the age of the patient, were given, the temperature having become normal or subnormal; and no rise in temperature was observed except that due to the reaction after each injection. After 1.8 cubic centimeters of vaccine had been given, the treatment was discontinued for six weeks, when the little patient was brought again to see me. He could now sit up and hold himself in any position he desired. The glands were barely palpable, the skin had cleared up, the lungs were clearing and no one could doubt the great improvement over his former condition. Weight 20½ lbs.

Case 2.—Woman, aet. 30. June 16, 1914. Came for examination, complaining of cough and expectoration, shortness of breath, pain over left chest, night sweats, Weight 140 lbs. Temperature 99 2-5 degrees Fahrenheit.

Examination showed enlarged cervicals and impairment of both apices, extending to the third interspace on the right and to the fourth interspace on the left.

From the first, the patient expressed herself as feeling better; the cough and expectoration at first were aggravated (very naturally,) but soon became less and finally stopped altogether. Lassitude and shortness of breath no longer gave her any concern, and the night sweats had stopped after the first two or three treatments. A weekly gain in weight of from three to four pounds was noted until the conclusion of the treatment, making a total gain of twenty-four pounds. The total amount of vaccine given was 5 cubic centimeters.

Re-examination on September 17, 1914 showed that the lungs had improved in the same proportion as the weight had increased and as the troublesome symptoms had disappeared.

Case 3.—Man, aet. 28. Jan. 19, 1914. Came for examination. He was unable to walk without crutches and complained of pain in left leg and knee.

On examination, an infiltration of both apices was found; several scars above the left knee had been there for fourteen years. At the lower third of the left thigh, a scar about 5 inches in length had resulted from an operation 1 1-2 years ago.

After receiving three or four doses of vaccine, the patient expressed himself as

feeling much improved; his sleep was no longer broken on account of pain. Before the conclusion of the treatment, a total of 5 c.c. of vaccine being administered, the patient was walking a good deal without his crutches. On November 20, I was informed by a member of his family that he had stopped using his crutches. His condition was so much improved that, last summer, he had farmed a tobacco crop.

A brief account of the eight cases (2) reported on at some detail last April may not be out of place in this connection. With one exception, I have seen every patient several times during the summer and fall. I have re-examined some of them and found that the lungs had practically cleared up in every case. One patient, Case 1, is out west, so that I could not re-examine him. The two babies with tuberculous adenitis continued to grow and remained well. The glands are barely palpable. In one of them, Case 3, the improvement has been so striking that the friends still take pride in telling of her rapid recovery.

Of the remaining 306 cases reported last April, the greater number live in Spray, and I have seen practically all of them during the summer and fall, and have re-examined a great many of them. There have been no relapses and all are apparently cured except the advanced cases.

After using the vaccine for one year and watching the progress made by the patients whom I have treated with it, I believe more firmly in the specific treatment of tuberculosis than ever before. The results, both therapeutic and prophylactic, that I have obtained with the von Ruck vaccine are so conclusive and apparent that they would force me to believe in it even if I had been sceptical. I have no hesitation in saying that, in my hands, it has done all that Dr. von Ruck claimed for it, and more.

The reason for presenting this paper before this meeting is my wish to promote the specific treatment of tuberculosis among the physicians of our district and state. I hope that a short review of a portion of the literature on the subject will enable you to see that at least good results follow its employment.

The specific treatment of tuberculosis may be accomplished either by passive or by active immunization. I shall not discuss the former, because it is not of great importance except in acute cases.

In active immunization against tuberculosis, the purpose is to stimulate the

tuberculous or non-tuberculous organism to the production of anti-tuberculous immune substances; in the former because, unaided, these substances cannot be formed in sufficient quantity and quality, else tuberculosis would not have developed; in the latter, for the purpose of prevention. The relation of these immune substances in the blood, to immunity has quite recently been well shown by Much and Leschke (3) who, likewise, demonstrated the truth of what von Ruck had asserted years ago, namely, that a satisfactory immunization against tuberculosis could not be produced except by a complete antigen, that is, by a preparation which contains all body substances of the tubercle bacillus. The results of these authors further confirm von Ruck in another claim, first made in 1897, namely, that an antigen containing the bacterial substances in solution is superior in its immunizing power to a vaccine consisting of whole tubercle bacilli.

For the purpose of active immunization, two kinds of preparations are employed, both of which are designated as tuberculins, although this name should properly be limited to the remedies of the first kind.

Tuberculins proper are solution obtained from the culture fluid on which tubercle bacilli have been grown. They are represented by Koch's Old Tuberculin, Denys' Bouillon filtré, (or give the English "filtrate") Beranek's Tuberculin and many other preparations of the same class. Tuberculins contain mainly peptones from the culture fluid and the metabolic products of tubercle bacilli (exotoxins.) They cannot immunize against the tubercle bacillus but only against themselves, in conformity with their specific character.

The second group of remedies for active immunization, are the vaccines, the first of which was the Watery Extract of Tubercle Bacilli (von Ruck) (1897, June,) being closely followed by Koch's New Tuberculin, TR (1897, November.) Then came Koch's Bacillus Emulsion, (1901) sometimes also called "New Tuberculin, B. E.") and von Ruck's vaccine (1912). Other preparations of both kinds have been proposed, for instance those of Spengler, of Much and Deycke, etc. Those mentioned will suffice to characterize them.

Vaccines may again be divided in two groups: those containing corpuscular elements and those representing solutions of tubercle bacillus substances. The former are TR (Tuberculin Residue)

and Bacillus Emulsion; the latter the Watery Extract and the Vaccine. In TR only a portion of the tubercle bacilli is retained, the water-soluble substances (OT) being discarded; Bacillus emulsion, consisting of the ground tubercle bacilli in suspension, is a complete antigen and should theoretically be perfect. Unfortunately the normal organism does not possess the ability of breaking up these bacilli and therefore cannot absorb their constituents, which is necessary for the production of immune substances. The tuberculous organism usually possesses this ability only to a limited degree.

The Watery Extract is a complete antigen, since it contains all body substances of the tubercle bacilli, but as some of them are quantitatively insufficient while others are present in amounts larger than required, it was superseded by the vaccine which contains the body substances of the tubercle bacillus in optimal proportions to secure an effective immunizing response on the part of the organism.

Hamman (4) gives an interesting review of the results obtained from the use of tuberculin, in the hands of various specialists. Only a few of the reports quoted by him will be used here for a comparative study.

Scholler reports on 211 patients treated with Denys' filtrate, with positive results in a total of 186 or 88.2 per cent. Of these, 49 were probably cured (23.2 per cent.) 105 were greatly improved (49.8 per cent.) while 32 were improved (15.2 per cent.)

Turban contrasts the results in 86 patients treated with tuberculin, with those in 241 patients treated only by the general methods in vogue. Of the former, permanent healing was recorded in 53 per cent.; of the latter in only 39 per cent.

According to Pottenger (5) of 589 first-stage cases reported in literature and treated with tuberculin and allied products, 496 or 84.2 per cent. were apparently cured; while of 611 sanatorium patients in the first stage, treated without tuberculin, but having all the advantages of sanatorium treatment, 391 or 64 per cent. were apparently cured.

In summarizing the results of tuberculin treatment, Hamman says that in many instances it promotes healing, and that recovery is more certain and more lasting than without it.

A tabulation in the report from the Winyah Sanatorium of Asheville, for 1907-8 (6) shows that 782 cases were treated, from 1888 to 1909 by general

methods alone, without the additional treatment in tuberculosis. The good results derived from the etiological treatment of this disease have been established for over twenty years by such men as Ehrlich (4) Goetsch, Klebs, and many others in Germany; by von Ruck, Pottenger, Trudeau and others in this country. With the improved and far more effective remedies which we owe to the researches of von Ruck, of Much and Deycke, etc., the last doubts in the propriety of this form of treatment will soon disappear, the more so as, with proper precautions, the necessity of nil nocere is duly respected, and the better results in the treatment of tuberculosis, under the general application of specific remedies which represent complete antigens will only depend on a suitable selection of cases and on the proper administration of the remedies.

apparently cured90 or 11.9 per cent.
improved238 or 30.5 per cent.
giving positive results in 328 or 42.4 per cent.

Tuberculin or some of its modifications had been employed in the treatment of 723 other patients, in addition to the general methods; and of these were discharged as,

apparently cured266 or 36.8 per cent.
improved310 or 42.8 per cent.
giving positive results in 567 or 79.6 per cent.

With the Watery Extract of Tubercle Bacilli, 1503 patients had been treated, with the following results on discharge,

apparently cured834 or 55.5 per cent.
improved508 or 33.8 per cent.
giving positive results in 1342 or 89.3 per cent.

A report giving the results of over one hundred physicians, with the Watery Extract in 2183 patients, records that there were,

apparently cured1098 or 50.3 per cent.
improved639 or 29.4 per cent.
giving positive results in 1737 or 79.7 per cent., which is almost the same per cent. of positive results as that obtained by the von Rucks themselves.

It is interesting to compare the permanency of results in cases treated with the Watery Extract, with those treated by general methods alone. After a period of from two to ten years, 602 former patients who had been treated with the Watery Extract, reported on their condition. Of these, 400 had been apparently cured on discharge and 320 of them, or 80 per cent. had continued without relapse. Of 202 former patients who had been discharged as improved, 94 or 46.5 per cent. had remained without relapse.

Inquiries to determine the permanency of results from general methods including climatic treatment, but without specific remedies have shown that of all cases discharged as improved or apparently cured, there were less than 10 per cent., that had not seriously relapsed, or succumbed to their disease, in the course of from two to five years after discharge, and the patients affected by this, as by the former inquiry, belonged largely to the well-to-do classes and had the advantage of ample means in the search after health.

From this array of evidence no special argument is needed in behalf of specific

It is very necessary that a careful selection of cases be made in the employment of the vaccine and this point cannot be stressed too much. Should the vaccine be used indiscriminately in every case presented, in the hope of a cure, disappointment of patient and physician alike would surely follow. But using ordinary care, seldom if ever will the result be disappointing. Just here, permit me to add, has arisen much prejudice and confusion against specific treatment in tuberculosis, because a proper selection of cases was entirely ignored and neglected and because in consequence the results were disappointing. In giving some practical points on the use of his vaccine and the Watery Extract, Dr. von Ruck (7) clearly defines the cases which derive the greatest benefit from the administration of these remedies. The physician who selects his case along the lines laid out by Dr. von Ruck, will be pleased with his results and seldom will he or his patients be disappointed.

In patients running a temperature of from 100 to 100.5 degrees F., the use of the vaccine is usually contra-indicated. If, however, the patient is in a good state of nutrition, even if he has a temperature of 100 degrees Fahrenheit.

I have found that after the administration of a few small doses this temperature often drops to normal and the ordinary doses for tuberculous patients can then be borne with but slight discomfort, if any. This type of patients often gain rapidly in weight and lose all of their annoying symptoms promptly.

There is a class of patients, with a temperature of 100-1 degrees F., or more, with night sweats, rapid loss of weight

and strength, cough, etc., in whom the vaccine fails to exert a favorable influence.—In these patients the demonstrable lesions give indications of caseous softening, and the vaccine or any other specific remedy is impotent, of necessity, as long as absorption of antigen continues from the tuberculous focus.

Lastly, in the advanced cases in which emaciation and a poor state of nutrition exist, but little benefit may be expected. Yet I have experienced gratifying results even in this class of cases. While one would not expect to effect a permanent cure in them, their increased comfort and their lessened distress, after the administration of the vaccine, often justify its employment. In most of my patients of this kind, practically all the annoying and aggravating symptoms were greatly ameliorated and they expressed themselves as feeling much improved. Their digestion had improved and they enjoyed their meals more than formerly; cough and expectoration were less troublesome and the chest pains were not so frequent.

In conclusion I can only point out to you that the specific treatment of tuberculosis is the natural method of treatment, imitating as it does the mode employed by nature in those cases in which the body resists the disease successfully. We are, then, not only justified in adopting this method of treatment, but it is our duty to do so, if we wish to do all we can do for our patients.

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The author desires to express his thanks to Mr. W. R. Lynch, Manager of the Department of Welfare and Health, for the permission of using the case records in the preparation of the paper.

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(6) Karl & Silvio von Ruck; *A Clinical Study of 337 Cases of Pulmonary Tuberculosis*, Asheville, N. C., Pamphlet, 1909, page 11.

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What Is the Value of the Roentgen-Ray in Examination of the Thoracic Cavity.

By A. Robert Taft, M. D., Professor Roentgenology Medical College of State of South Carolina, Charleston, S. C.

Of all the newer methods of diagnosis of disease within the thoracic cavity the Roentgen ray is probably the most useful. The difference in density between the lungs and other structures found within the thorax makes this especially easy to examine and the chest has been called the playground of the radiographer. The modern advances in apparatus and better protection for patient and operator have made possible the taking of the pictures in a fraction of a second and so eliminating the slightest blurring of heart by movement and with the fluoroscope the organs may be examined carefully during their movement, pulsations of heart, and aorta movements of diaphragm on either side and on rotating the patient one quarter bismuth going down the oesophagus.

This examination is done in a few minutes by most radiographers before making a fluoroscopic of the stomach and on several occasions I have been able to demonstrate lesions in the chest and finding a negative stomach show that this and not the stomach was the cause of digestive disturbances.

Enlarged glands are very common and probably occur so often that they may be said not to be pathologic unless of some size or large number. It is well to remember that these may be syphilitic and not tubercular and give the patient many times the benefit of specific treatment. The prevalence of specific lungs often taken for tuberculosis explains to my mind the cures reported from time to time of consumption by mercury.

Making good X-ray pictures of any part require along and arduous training, and the proper interpretation much time and study as well as a good knowledge of general medicine. So this work becomes a specialty of the highest type and should to get results be left to the physician specializing in roentgenology, or to the specialist on diseases of the chest who has had the time and persistence to become a maker and reader of X-ray plates of his cases.

Stereoscopic plates are of much value at times in making a diagnosis, but on account of the increased trouble and expense are not used in routine work. Figs. 5a-5b are stereoscopic pictures.

The fluoroscope seems to be of especial value in examining the chest of children,

for these little ones often squirm and wriggle too much to get satisfactory pictures and their little chests are ideal for looking through. Here Slukas sign, the three cornered shadow with the base to

the heart and the apex to the periphery is of value in indicating a tuberculous root focus.

Enlarged tracheo-bronchial glands are easily seen and other evidence of value may be gathered.



Fig. 1

Fig. (2) Is another case of stricture of the esophagus. The patient stated that he could not swallow solids but could liquids, and this was proven by giving him bismuth in buttermilk and seeing that it went down without any trouble in front of the fluoroscope, but a five-grain capsule containing bismuth was absolutely arrested for an indefinite time.



Fig. 2

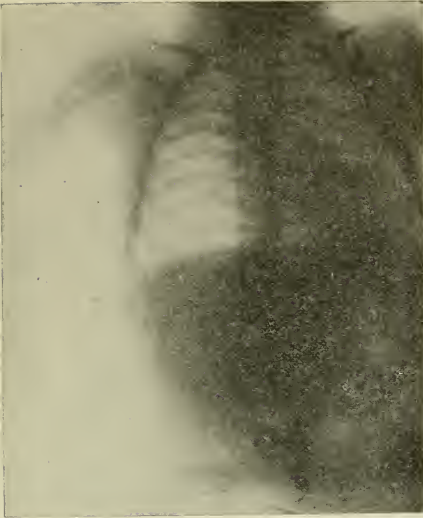


Fig. 3

Fig. (3) An empyema of the pleura on right side. The picture was so convincing that although probably through blocking of the needle pus could not be gotten by aspiration, the surgeon did a resection found the diagnosis correct.

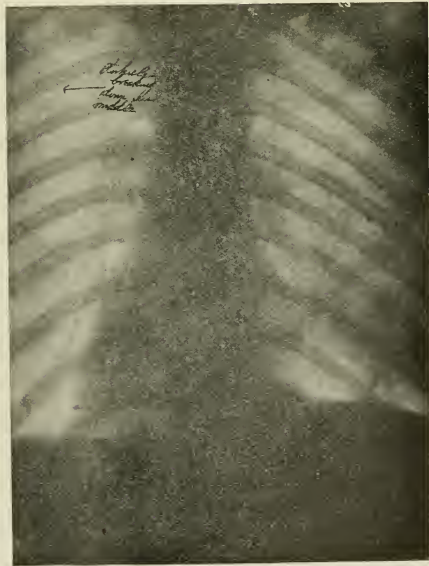


Fig. 4

Fig. (4) Atubercular deposit in the left lung that had broken down. The patient a young man had several years ago been treated for tuberculosis, had gotten apparently well and after taking a cold suddenly had a hemorrhage. The subsequent history bore out the diagnosis.

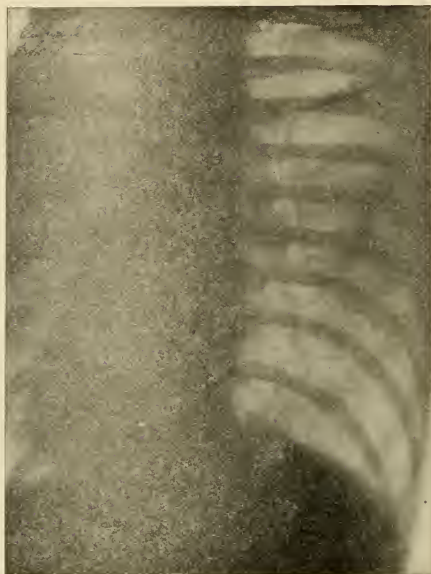


Fig. 5 a

Figs. 5a-5b, show stereoscopic picture of tubercular deposit in apex of left lung. A heavy chain of glands may be seen along the

right border of the heart. These plates may be viewed stereoscopically with the ordinary glasses used for looking at photographs.

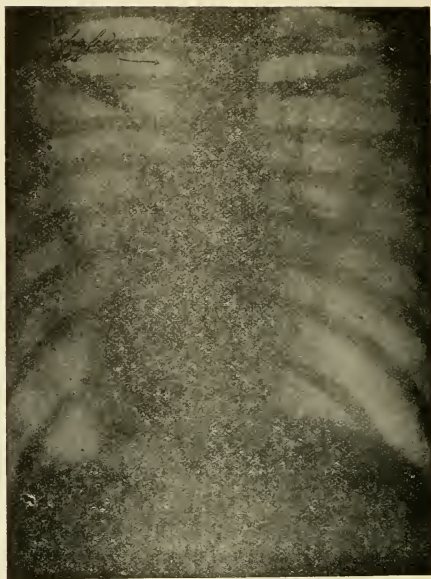


Fig. 5 b



Fig. 6

Fig. (6) Shows a large aneurysm of the thoracic aorta.

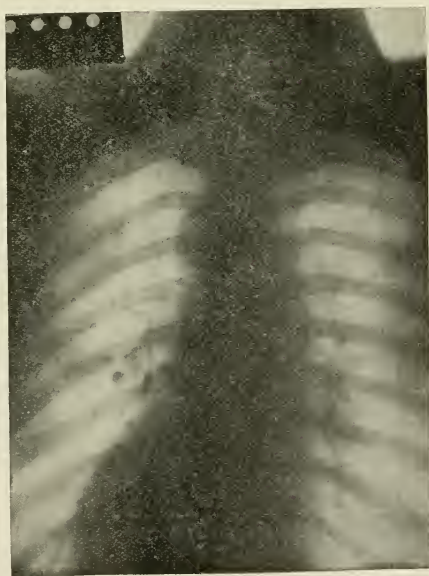


Fig. (7) Markedly enlarged glands, subsequently shown to be specific.

Fig. 7



Fig. 8

Fig. (8) Case of cardiac hypertrophy.

These three cases were referred from the throat clinic outdoor department of the Roper Hospital run under supervision of the S. C. Med. Col. These three cases all had symptoms somewhat alike. Cough some hoarseness, etc., and while suspected the X-ray findings helped very much in confirming the several diagnosis.



Fig. 9

Figs. (9) and (10) are two more thoracic aneurysm. All three of these aneurysms showed marked pulsations under the fluoroscope and could be diagnosed from solid tumors. Two of these three died at Roper Hospital and diagnosis was confirmed by autopsy.

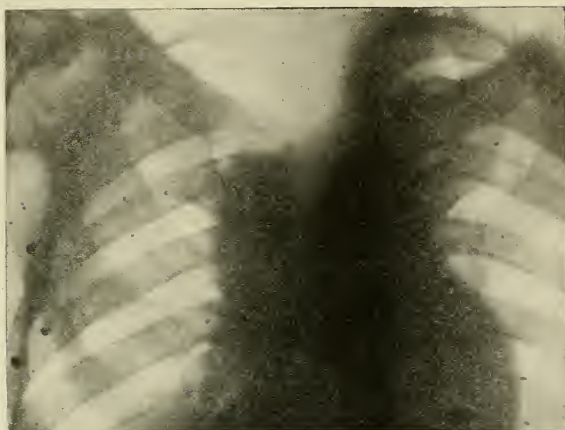


Fig. 10



Fig. 11

Fig. (11) Persistent thymus in a baby who had crowing respiration and at times the breathing got alarmingly embarrassed. This baby made an excellent recovery under Roentgen ray treatment. The gland may be seen as a triangular shadow, base down on top of the heart. The books describe the shape as a corcocopoea or old time candle extinguisher placed base down on top of the heart.

Our recent knowledge that the thymus when persistent, absolutely without symptoms in the adult, may after goiter operations enlarge from some reciprocal action, sudd enly and cause death, makes it imperative that the careful surgeon should have pictures of the chest before operation for Graves Disease.



Fig. 12

Fig. (12) Case of double cervical rib unrecognised for several years and diagnosed neurasthenia, neuritis, etc., and even operated on for Graves Disease, finally consulted a n internist who suspected the condition and had his diagnosis confirmed by the X-ray laboratory.



Fig. 13

Fig. (13) A bullet buried against the articulation of the first rib and the unsuspected cause of pressure symptoms at once relieved by the surgeon.

The Surgical Treatment of Cancer of the Colon.

Rotter analyzes 112 cases of cancer of the colon reported from his clinic by Peterman covering the years 1893 to 1907, together with 48 cases treated from 1908 to 1912 and not reported until now, thus making 160 cases altogether. Of these 160 cases 79 were treated by radical operation, while 81 were not suited to such procedure, either because the disease had advanced so far that it would not be entirely removed or because the patient was suffering from ileus on admission to the hospital, and by the time the ileus was relieved by operation the case had terminated by death. In case of ileus the usual procedure to be recommended is the establishment of a fecal fistula; if the portion of the bowel affected has a long mesentery and can readily be brought up, an artificial anus may be made and the tumor resected, or if possible an enteroanastomosis done. But patients with ileus bear operation very poorly and are apt to die in collapse or from infection. The mortality in such cases varied in these series from 44 to 70 per cent. The most desirable procedure in case of ileus at the first operation is to simply establish a fecal fistula and to note the part of the bowel involved, so that at the second operation, to be carried out at a more favorable time, the proper incision can be made.

In the first series of cases, out of 55 cases operated upon radically 10 died, and in the second series out of 24 cases five died. In the first group of cases, namely, the ones in which the tumor was in the cecum, ascending colon, or the first part of the transverse colon, ileocolostomy was done, while in cases of involvement of the remaining part of the colon end-to-end anastomosis was performed. In each case the tumorbearing portion of the colon was extirpated.—*Arch. für Klinische Chirurgie.*

Intestinal Disturbances in Infants.

Dyspepsia is produced by the ingestion of more food than the digestive processes can take care of, either too large feedings being given, or the interval between is far too short. Owing to this disproportion between the amount of food ingested, and the digestive powers, chemical changes take place in the contents of the alimentary canal which becomes pathological and irritates the mucous membrane vomiting and diarrhea.

Besides the obvious prophylaxis of care in apportioning the food, starvation is

advised for treatment of this dyspepsia, for twenty-four hours, on a weak infusion of Russian tea sweetened with saccharin instead of sugar. If the symptoms do not yield to this treatment, calomel may be given in doses of 1-3 to 3-4 gr. at intervals of two hours for three times. Milk diet should not be resumed at once when the stomach and intestines are emptied but some starchy diet substituted. Soxlet's nutrient sugar, a soluble preparation of malt and dextrin is recommended to be used in 5 per cent. solution for very young infants. For older babies pure oatmeal or cornflour may be used. Within three days the stools should be semi-solid and of a dark brown color, when the milk may be cautiously resumed. If the vomiting and anorexia continue, the motor functions of the stomach should be investigated. The child should be given a meal adjusted to its weight and age, and the evacuation examined for undigested food and free hydrochloric acid. If the stomach is not empty and contains no free hydrochloric acid it should be washed out with a 1 per cent. solution of Carlsbad salts. In obstinate cases pepsin and HCl may be of use, or a mixture of 1 gram of liq. strychnini, 2 grams of fluid extract of condurango, and ten grams of tincture of rhubarb may be given, in doses of five drops each fifteen minutes before a feeding, three times a day.

Infantile enteric catarrh generally occurs as a sequel of the dyspepsia, with thin, watery stools, very acid, and speedily producing intertrigo. The bad results upon the general health are not slow in appearance, and wasting sets in. The respiration is deep, difficult and frequently sighing, the pulse irregular and small. Vigorous children often exhibit a high fever which may be lacking in those of weaker constitution. The great danger to life in this condition is in collapse, and the best means to combat such a tendency is the hypodermic injection of camphor in an initial dose of 0.1 to 0.2 gram, half the dose repeated at two hour intervals. A very little tea may be given by mouth, and the body supplied with water by subcutaneous injections of saline solution, 150 c. cm. twice a day. Cold wet packs may be employed to reduce the fever, and fats should be eliminated from the diet even after the tendency to collapse is overcome. The best food is mother's milk with the fat taken out. If this cannot be had, thin barley water or other similar starchy preparation may be used. The author reports

some cases in which good results have been obtained by giving good full milk warmed to 40 degrees, C. and treated with pepsin, the amount of the latter, however, being double that usually indicated.—Editorial in Pediatrics.

An Application of the Roentgen Ray to Infant Feeding.

Dr. Charles Hendee Smith presented this communication. He pointed out that the teaching of doctors and nurses for many years had been that the child must be kept at the breast or bottle for twenty minutes, must then be held in a perfectly horizontal position, and be put to sleep at once without change of position. Many mothers did not follow this plan, but allowed the child to take a shorter or longer time for nursing and then drew the following conclusions: (1) Regurgitation, colic, and indigestion depended not only on the food but on the manner in which it was given and the posture of the child between feedings. (2) The food must be of proper composition and proper amount. It should be given at as long intervals as possible, depending on the gastric capacity and the total amount of food required per day. (3) A feeding should not be taken too slowly, five to ten minutes being long enough and fifteen minutes being the maximum time. (4) The child should be held upright before feeding to get rid of any gas in the stomach. If air was swallowed in large quantities it was often necessary to interrupt the feeding one or more times, holding the child erect until the air had been expelled. Immediately after feeding the child should be held upright against the mother's shoulder and given the opportunity to eructate gas. (5) The child should be placed in bed preferably in the prone position with the head of the bed somewhat elevated. This routine might be followed with every child even though he did not regurgitate. Habitual tongue suckers had to be held up some times between feedings.—Pediatrics.

Antiseptics Versus Asepsis.

A number of years have elapsed since Pasteur gave to the world the results of his epoch making investigations concerning the role played by microscopic organisms in causing abnormal conditions in animals and plants. In consequence of these same investigations, it was but a short time before the late Lord Lister applied destructive agents to minute forms of life. It was then that antiseptic surgery was brought forward by its bril-

liant originator, and the carbolic acid spray became famous. Many conditions that had been the terror of the operator at once became amenable to treatment, and quite unforeseen results were obtained. Antisepsis ruled for many years.

There was, however, a new school arising, that of asepsis. Its sponsors took the stand that if these contagious maladies were due to the presence of living atoms, it would be better to get rid of them before beginning operation. This seemed logical, proved practicable, and eventually asepsis relegated antisepsis to a secondary position. For many years much time was devoted to the elaboration of technic, to the perfection of the operating room and to the cleanliness of both operator and patient. A lowering of mortality and morbidity followed, and it seemed as if the pinnacle of perfection had been attained, that asepsis was the one and only method.

That this is not entirely true seems to be indicated by the reports that are coming to us of the surgery on the battlefields of Europe. Modern methods are truly wonderful, but no amount of human energy or forethought could have provided sufficiently for the appalling number of wounded that now need attention. It is no longer a matter of operating upon aseptic wounds, but of treating injuries that are in a state of infection that defies description. Asepsis has had to give way to its predecessor, antisepsis, and many are the lessons that are being learned by many surgeons. The discussion going on at present in England as to the use or non-use of pure carbolic acid—always the favorite British antiseptic—is but one phase of the question. Probably, when this war is over, certain discarded methods will have been found very valuable in times of stress. Asepsis, of course, can never be discarded, but antisepsis evidently will reappear on a more solid footing.—Editorial in Medical Record.

In re-Pil. Cascara Comp. Robins, Mild and Strong, see page x, they contain no Strychnia to poison, no Belladonna to dry the secretions or abnormally dilate the pupils—nothing to injure your patients. They are suited to all conditions requiring more or less alimentary stimulation. Given per se or with any other remedial agent. As anti-dyspeptic, aperient, laxative or cathartic they are always pleasant and thorough, and do not leave the alimentary tract in a state of atony. No unpleasant symptoms develop from continued use.

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CHARLOTTE, N. C.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINA AND VIRGINIA TO MEET IN SEVENTEENTH ANNUAL SESSION IN CHARLESTON, S. C., FEB. 17-18, 1915.

The seventeenth regular annual session of the Tri-State Medical Association of the Carolinas and Virginia will meet in Charleston, S. C., on February 17, 1915, and as usual the session will continue through two days. This Association was organized in 1898 by a Committee of Organization from Virginia consisting of twenty-eight well known leaders of the profession of that state headed by the distinguished Dr. Hunter McGuire, a committee from North Carolina of twenty-eight equally prominent North Carolinians with Dr. Wm. H. H. Cobb as their chairman, and a committee of four well known South Carolina gentlemen of the medical profession with Dr. James Evans chairman.

Its organizers felt it supplied a felt want in affording an opportunity of bringing into more close and sympathetic affiliations the leaders of medical thought and action in the constituent states, a pleasant annual reunion of practitioners each mid-February at a season when there were no other medical societies meeting, in this way breaking the monotony of the long interval between the societies like the A. P. H. A. and the Miss. V. Med. A. with their autumn, or early winter sessions, and the numerous state and other national medical organizations holding their meetings in the spring time.

How well the intent of its organizers has been realized, the excellent sessions that have been held, and the valuable annual volumes of transactions issued attest, in connection with the personnel of the membership, the wisdom of its founders the chiefest of whom are generally recognised to have been two greatly beloved members of the profession, the late Hunter McGuire of Richmond, Va., the South's greatest surgeon of his day, and the equally beloved and respected physician of Goldsboro, N. C., the late Wm. H. H. Cobb.

Of the original organization committee, six Virginians have passed, six North

Carolinians, and alike two South Carolinians, also, have gone to their eternal rest. Of the remaining members of the organization committees it is interesting to note a majority, are at this time active members of the Tri-State Medical Association, and several of their names are to be noted on the program to present papers at the forthcoming session in Charleston this month.

These original members have gathered about them in the Association approximately more than 160 Virginians, 160 North Carolinians, and 100 South Carolinians, who are in the main, leading men of the profession in their constituent states. Of the sixteen gentlemen who have filled the position of President in the Tri-State, no less than twelve of them have been previously honored by their home state medical society with an election as president; and since 1909 every Tri-State president, including the present incumbent, has been thus honored by his state medical society.

There has been organized in the South and middle West within the past forty-odd years some seven or eight Tri-State Medical Societies, and of these a single one, has gone out of existence, and it only retired in the taking part in the organization of the great and most excellent Southern Medical Association which bids fair to rival in popularity our great national medical association.

The other Tri-State Associations continue in existence, doing good work, fostering what the members of each appear to think useful local interests and promoting helpful professional purpose in their respective minor spheres of activity and influence. It is interesting to note in this connection, that the men of these different Tri-State organizations are very often equally active and earnest in developing the interests and influence of the larger medical societies; hence it is hardly a fair assumption to say the various Tri-State medical organizations are in any sense in the way of, or barriers to, the fuller and more complete evolution of the larger societies covering much wider fields of effort and membership. It is often said, there are too many medical societies; and while this admits of serious argument from the viewpoint of dues and time to attend, yet it is interesting to note, that a majority of the very active men in the larger, or national, or semi-national societies, are equally interested in their Tri-State and State medical organizations, reading papers, and participating actively in the labors of all.

As a matter of fact, it is probably safe to assert that the average medical society membership and attendance, are in large measure consequences of habit and custom, coupled with a friendly sympathetic regard for one's fellow toilers in the lines of human pathology and therapy, whom the doctor enjoys meeting with time to time, and cultivating his friendly regard for. Unquestionably the social contact element figures largely in the item of attendance, and upon the whole, it is well that we are blessed with many medical societies, for all are doing good, and have fields of appropriate endeavor. And with this latter thought in mind, again the attention of the reader is invited to the coming meeting of the Tri-State Medical Association of the Carolinas and Virginia in Charleston, S. C., that choice old Southern city where reside many of the most charming people of our loved South, and where ever cluster tender memories of the past, the home of a hospitable folk, a center of refined culture, and a charming place to spend a couple of days.

The Tri-State program, published in other columns of *The Journal*, is replete with excellent papers, many of them from the pens of men of nationwide reputation, as well as choice contributions from among the best of our local Tri-State members.

Then Doctor, remember the date, and the place, of the seventeenth annual meeting of the Tri-State Medical Association of the Carolinas and Virginia—Charleston, S. C., February 17-18, 1915.

Remember, too, you will be welcome, and COME.

J. H. W.

PROHIBITION.

On the first of last July the new prohibition law went into effect in West Virginia. Great hopes have been enjoyed as to the vast benefits to be derived from this measure. Even though the confirmed lover of whiskey may still manage to obtain his poison, there are many who do not care for the stuff enough to take the trouble necessary to get it, and it is kept out of the way of the adolescent. But does prohibition really prohibit? Is the actual working of such a law nearly as effective as its advocates believe it will be?

The following letter from a friend in West Virginia may show that there at least the law is working well. The writer is a physician who has for years devoted himself to the reclamation of drunkards—or rather to the cure of the whiskey habit:

"Since our state went dry my business is dead, and nothing can revive it. For the state voted over 90,000 dry, the constitution is now amended, and I never look for it to be changed. I wish you could note the difference in the city. They have found it best to let many of the police go, as there seems to be very little use for them. A drunken man is a very rare sight now, while before they could be seen almost any time of day, and any day. And it also looks queer to see men standing at the old saloon counters drinking buttermilk in place of liquor. Every one of the places formerly used by the saloons now has a respectable line of business in it, such as clothing stores, jewelry and fancy restaurants."

So far, well and good. We congratulate our sister state on the results of her effort to keep her citizens decent and sober. This is all the more desirable as she has by the opening of her coal mines attracted a large influx of the less developed classes of European immigrants, who may be assimilated into good Americans much better without the influence of alcohol.

The critical time for the new law comes when its active enforcement is attempted. Our correspondent acknowledges that drunken men are occasionally to be seen now on the streets of Parkersburg. Why? Where do they get their intoxicants? Probably across the river in Ohio—but that assumption should not be accepted without due investigation. Under it the illicit rumshop may operate; and a law successfully evaded or ignored is far worse than no law. A pretty sharp sentence to the stone pile for drunkards, doubled in case they refuse to tell the source of their liquor supply, soon discourages the too thirsty citizen. If Ohio knowingly intervenes to prevent her neighbor commonwealth providing for the sobriety of her citizens, she furnishes a powerful argument for the abolition of the few remaining state rights. Public sentiment in the Buckeye State should be aroused, and the evil there corrected.

How much more powerful is the general movement of our women against alcohol, than the methods employed by the English militants. For the prohibition movement is distinctly a feminine one; a plea of the mother for her son and the wife for her husband. What man can hold out against it, when put by the women thus? We feel in our inmost hearts that it is their right, that we dare not refuse the plea. American womanhood asks American manhood for the

means of protecting her home from the influence of alcohol—and we need no telling as to what that is, and why she seeks to exclude it.

Whatever may be our individual practice as to drink, we doff our hats to the women, and cry—Way for the ladies!

GOOD HEALTH AND LONG LIFE.

The human body like all other objective realities is made up of matter. The ultimate constitution of matter is a subject which has engaged the deepest study and the most profound thought of many of the world's greatest thinkers for more than two thousand years but until within recent years no general agreement has been reached concerning it. During the last few years, however, the general consensus of opinion among the world's greatest scientists or rather physicists, is, that in its ultimate constitution, matter is electricity. About four years ago Dr. W. D. Horne wrote as follows: "From considerations based (partly) on very elaborate mathematical calculations it is now maintained that matter is composed of electricity and nothing else. Electricity here is not considered a form of energy any more than water is a form of energy, but as a vehicle of energy, which can be moved from place to place and whose energy must be in the form of motion or strain. In motion it constitutes current and magnetism; under strain it constitutes charge, and in vibration it constitutes light." (Science History of the Universe, Vol. 3, p. 18).

We formerly regarded the atom as the smallest division of matter. While experimentation with colored solutions of a known concentration shows the hydrogen atom to be almost infinitesimal in size, it being about one five hundred millionth of an inch in diameter and weighing about one ten billionth of a grain, yet our greatest physicists claim that the atom is made up of still smaller bodies known as electrons. "Sir Oliver Lodge describes the atom of matter as constituted of an individualized mass of positive electricity diffused uniformly over a space the size of an atom, perhaps spherical in shape. Throughout this small spherical space some eight hundred minute particles of negative electricity, all exactly alike, are supposed to be scattered, flying vigorously about, each repelling every other and yet all contained within their orbits by the mass of positive electricity. The positive electricity is very much attenuated and constitutes perhaps only about one per cent. of the mass of

the atom, while the negative electrons are correspondingly dense and so inconceivably small that the eight hundred are less crowded in their atom than are the planets in the solar system. Atoms of different kinds of matter are supposed to be constructed in the same general manner and of the same kind of electrons, but the number of electrons in an atom is proportional to the atomic weight of the element. Thus oxygen would have sixteen times as many electrons in its atom as has hydrogen. When the crowding becomes excessive, as in the very heavy atoms of uranium (the heaviest substance known), thorium and radium, having atomic weights well over two hundred, the atoms become radio-active, probably due to numerous collisions between the electrons, some of which are being constantly shot away." (Vide supra, p. 19). Except in some of the newer gases the atoms never exist alone but combine in pairs or groups to form molecules.

DAMAGE SUITS AGAINST PHYSICIANS AND SURGEONS.

That there is constantly increasing a tendency to bring suits against physicians and surgeons in the South for damages in cases of alleged malpractice, and for other purposes, the ultimate end of which is a hoped-for financial addition to the plaintiff's bank account, is a fact, that lamentable as it is, must be seriously reckoned with, and carefully considered by all engaged in the practice of medicine or surgery. Obsessed with the single thought most often, of affording relief, or cure, to his patient, and seeking with all possible earnestness to overcome the mastery of the confronting disease, the physician or surgeon is well calculated to never cherish the thought, for one single moment, that his patient, or his next of kin, or friends, may be at the same time, equally carefully considering the possibilities of finding an avenue of approach to the pocket-book of the attending physician, or operating surgeon, with a view to extracting damages in the event of the ending of the case not being exactly as desired.

Certainly this is not a pleasant frame of mind for a physician to be in when battling with disease, or when ransacking his brain in his best endeavor to bring needful relief; but the frequency with which damage suits are being instituted and vigorously fought through the various courts, compel professional dangers ever encountered in active practice.

Of course it is a natural assumption,

that both medical and surgical skill is constantly increasing, with the consequent resultant greater capacity on the part of the members of our guild to serve successfully their patrons, while it is equally correct to say the public's knowledge of things medical and surgical is perhaps also increasing *pari passu*, and thus with the general averaging upward all the time of the knowledge common to both layman and doctor, the demands legitimately and necessarily made upon practitioners are constantly greater with each passing decade.

For a generation past, there has been a manifestly increased disposition on the part of the community at large to seek damages from corporations for every real or imagined injury, and the intimate history of many suits fought through the courts by corporations unjustly assailed, constitutes one of the most striking pictures of human depravity, and most convincing demonstrations of the readiness with which many people, who in the ordinary affairs of life would not steal money from the pockets of their fellow man, will deliberately and knowingly conceive, purpose, and plan to collect money from corporations with as slight regard for the principles of common honesty as the highway bandit who deliberately stops the coach and calls out "hands up," or demands "your money or your life!"

That this sentiment has been allowed by our ethical and moral teachers to continue to grow without being held before the public gaze to the strictest censure, is but another trite illustration of a degenerated state of the popular mind in the effulgent glare and glitter of our high grade twentieth century civilization. Now that the custom of damage suits against corporations has become firmly fixed, it appears only natural that medical men should also come in for their share of this modern form of legalized piracy.

That damage suits against medical practitioners are to be seriously reckoned with by the profession is a self-evident proposition, and one for which remedies should be carefully sought. First, it is very evident, that every professional man should never assume and continue to carry the responsibility of any case without carefully studying it in its entirety so as to fully satisfy himself as to the correctness of his diagnosis and his therapy. Again, if one has not the time to give any given patient the time, and requisite skill, either medical or surgical attention desirable, then it is clearly the duty of

the physician to have the patient secure some other attendant, or call in a consultant. Damage suits also impress upon us the necessity of exercising all possible care in serving every patient we attend. In short if we expect kindly consideration from our clientele, we must merit it at all times and in all cases we attend.

But after all is said and done as to medical men's having performed their duty to the uttermost degree in a given case, and in all cases, the unfortunate fact remains true, that with the modern thirst for damage suits, "blood money," in most cases it is, medical and surgical practitioners are, and doubtless will continue to be favorite subjects for such suits. This being the case, what is to be done? Manifestly every damage suit against medical practitioners, should on general principles, be fought to a finish with uncompromising vigor. In no case should settlement out of, or in court, that in any degree compromises the professional integrity of the physician or surgeon, be agreed to, no matter how insignificant the sum demanded, or how trivial the issues involved may appear.

In the defense of damage suits, the defendant should have the loyal support of his professional colleagues, unless such defendant physician or surgeon is manifestly and openly, in the wrong; and in this event, of course one should not expect to receive the active support of his professional confreres.

Again, there is another, and very important phase of this subject to receive the thoughtful consideration of every medical practitioner, and it is this: Rarely indeed does any plaintiff enter an action for damages against a doctor in a court in the South unless that plaintiff has taken counsel with some other physician who has advised that in all probability or with certainty a successful issue should be expected! Is it asking too much of medical men, to insist that it is the duty of each of us to discourage at every opportunity the instituting of such suits, not only because such a course is professionally right and proper, but for the meaner reason that the more common such action as at law become in any given community, the more likely any and every practitioner "above the home-stead," is to sooner or later, incur the possibility of defending a similar action.

J. H. W.

LABORATORY AIDS IN THE DIAGNOSIS OF NEUROLOGICAL AND PSYCHOLOGICAL CONDITIONS.

Investigations have been made upon the blood, urine and feces to discover the products which attend pathological alterations in the nervous tissue. These investigations have been valueless because the entire nervous system comprises only about two per cent. of the total body and the small amount of products from the nervous system is lost in the large quantity of blood, urine and feces, which represent the waste products of metabolism of the entire body.

The cerebro-spinal fluid comes into more intimate contact with the nervous tissue and, therefore, should contain the products of metabolism in larger amount and in the least altered form. If this is true, then, our efforts should be confined to the examination of the cerebro-spinal fluid. Recent investigations of normal and pathological fluid have given us valuable findings. An examination of the cerebro-spinal fluid is now considered essential in the study of many neurological and psychological conditions. Knowledge of diagnostic and prognostic importance is secured, and, in many cases, the efficacy of treatment is observed.

A complete examination of the cerebro-spinal fluid should include: the total quantity, whether increased or decreased; the appearance, whether clear, turbid, or bloody; the specific gravity; the albumin and globulin content (by means of the Nonne Reaction or its modifications by Ross and Jones and Noguchi; the capacity for reducing Fehling's Solution; the Colloidal Gold Chlorid Reaction; the cytology, qualitatively and quantitatively; the bacteriology; animal inoculation and agglutination properties; and the complement-fixation tests. None of these observations when taken alone are conclusive but when grouped give added significance. A negative finding is often as valuable as a positive finding in confirming a diagnosis.

The recognised diagnostic findings in the cerebro-spinal fluid in syphilis are the positive Wassermann reaction, the increased cell count above 10 (lymphocytosis) and the increased globulin content, as recognised by the Nonne, or the Ross-Jones modification, and the Noguchi reactions.

There is little or no relation between the blood Wassermann and the Wassermann reaction in the cerebro-spinal fluid. In the cerebro-spinal fluid it is of greater

significance when it is desired to establish the nature of a given nervous disturbance. The Wassermann reaction in the cerebro-spinal fluid, according to published reports, is negative in all fluids examined during the first three stages of syphilis and becomes increasingly positive when applied to cases of cerebro-spinal syphilis, tabes and paresis, averaging between 90 per cent. and 100 per cent. positive in the last condition.

The cell count is still unsettled. Many workers are satisfied with the quantitative estimation of their increase while others rely mainly upon the differential count. The cell count is increased in about 90 to 95 per cent. of syphilis. An increased lymphocytic cell count is also present in tubercular meningitis, tabes and paresis. A polymorphonuclear leucocytosis is present in infection by pyogenic, pneumococcic and the meningococcic microorganisms.

A positive globulin reaction is present in many pathological disturbances of the nervous system. Its presence in a doubtful nervous case is presumptive evidence in favor of its being a syphilitic or parasymphilitic disease of the nervous system. A negative globulin reaction in a suspected tubercular meningitis is of value in excluding meningitis. This reaction alone, although positive in from 95 per cent. to 100 per cent. of syphilitic infections of the nervous system, does not enable one to differentiate between syphilitic and non-syphilitic conditions.

The Colloidal Gold Chlorid reaction is one of our most valuable laboratory tests in the examination of cerebro-spinal fluid. This reaction is particularly useful in differentiating insipient general paresis and neurasthenic disturbances in a syphilitic. In general paresis there is a distinct curve which is known as the paresis curve. In tabes the reaction is not so characteristic. The reaction is more delicate than the Wassermann reaction; it is nearly constant in cases of syphilis of the central nervous system; it is extremely sensitive and reliable; the amount of fluid used is quite small; definite conclusions are reached with ease and rapidity; and the margin of error is exceedingly small. It runs parallel with the Nonne and bears a relationship to the Wassermann reaction which is constant.

In all doubtful cases of nervous disease we should place great importance on the findings in the examination of the cerebro-spinal fluid. We must remember, however, that much of the knowledge obtained is relative and should be consid-

ered only in relation to the clinical findings. The positive Noguchi or Nonne is no more conclusive than a leucocytosis alone is conclusive in a diagnosis. The Wassermann and Gold Chlorid reactions are the most conclusive of our laboratory findings. The absence of findings indicative of meningeal reaction in a single examination cannot be taken as conclusive evidence of freedom from central nervous involvement. While not absolutely conclusive the value of the examination of the cerebro-spinal fluid in diagnosis in doubtful nervous cases can scarcely be overestimated.

THE HOSPITAL IN THE SMALL CITY OR TOWN.

Efficiency is the watchword of the hour and to keep in the van of progress all kinds of business and every sort of enterprise must be conducted in an efficient manner. Proper sanitary provisions and regulations to avoid preventable diseases and keep the people strong and healthy are more and more being recognized as of the greatest economic value and being adopted by all intelligent communities. But when every possible precaution has been taken to stamp out disease there still remains a large number of diseases, accidents or other injuries that temporarily or permanently injure a considerable percentage of the people thereby causing loss of time to the workers, lowering of their efficiency and thus causing a serious loss to the whole community. In the larger cities hospitals are endowed or supported by municipal or other contributions to look after those needing assistance or proper care. In the smaller cities or towns, however, conditions are often very different, and while every one will admit that a properly conducted hospital is one of the most necessary and beneficent institutions a community can possess, still many towns of considerable size do not have one. Every town of several thousand inhabitants, continually, has emergency cases such as fractures, severe injuries, acute appendicitis not to mention many other things which in order to save the lives of the patients demand immediate care and attention and cannot wait to be sent to some large city if their lives are to be saved or they are to be given the best chance of complete restoration to health. This being the case and as good health and physical integrity are every year being more fully recognized as the most valuable assets any community can possess, why is it that every community does not have a well equipped and properly conducted hospi-

tal? This is due to a number of reasons:

1. Many of the people are ignorant as to the benefits and advantages of hospital treatment and have a prejudice against hospitals. 2. Many hospitals are managed as a part of county or municipal political machines and their control is given over to political workers as a reward for their services regardless of their honesty or their ability to perform the work in an efficient manner or give the community the kind of service to which it is entitled. 3. The widespread antagonism among physicians, their lack of esprit du corps and their inability or disinclination to work together. How can these evils be overcome and the greatest good be done to suffering humanity? 1. The people must be educated to understand and appreciate the fact that in most cases they can get better care and treatment and at a less expense in a hospital than it is possible for them to have in their own homes.

2. Instead of hospitals being turned over to political henchmen their control should be in the hands of a board of representative physicians. Our banks are managed by bankers; our great mercantile establishments are under the control of trained merchants; great engineering projects are directed by skilled engineers and the same is true of nearly all other enterprises and industries. Why then should it not apply to that most important and beneficent of all kinds of work—the care of the disease infected or injured sufferers—and the hospital be under the control and management of the doctors of the community. Some may object and claim that this cannot be done and that the work would be a failure. This is a mistake. It CAN and IS being done successfully and as an illustration of this we desire to call attention to a concrete example of a far Western town where a hospital organized and controlled by the doctors of the community has been in successful operation for over eleven years. It was organized and has been conducted as follows: One of the physicians of the town which then had about 4,000 people (it now has about 8,000), suggested to several of his fellow practitioners that they ought to organize a hospital association. After considerable discussion and mature deliberation this was done and the association incorporated under the laws of the State in June, 1903. Each physician bought some of the capital stock to buy equipment and get the work started. According to their constitution every legally qualified and reputable phy-

sician has the privilege of taking his patients to the hospital and has full control of their professional management while there no matter whether he is a stockholder or not.

The Association issues two kinds of stock:

1. The common stock which can be purchased by anyone. This stock draws 7 per cent. annual dividend but has no voice in the control or management of the hospital.

2. Physicians' and surgeons' stock of which each physician has the privilege of purchasing one share of \$100 but no more. This puts all on an equality and does not permit one or a few physicians to monopolize or control the institution or work. These stockholders elect the board of directors and have full control of the management of the association. This stock draws no dividends until 7 per cent. annual dividends have been paid on the common stock, after which it participates equally with the common stock in any dividend balance that may remain.

The hospital is managed by a board of three physicians who are elected annually.

In 1906 the association built a good brick building 62 by 32 feet, two stories with basement and attic which furnishes accommodation for twenty-five patients and the nurses and other employees of the hospital.

At the same time a Training School for Nurses with a three years' course of instruction and training was organized. Physicians of the city, a graduate dietitian, and the Superintendent of the Hospital made up the corps of instructors. They entered into the work enthusiastically and have given a very complete course of instruction ever since that time. Between thirty and forty nurses have been graduated and with possibly one or two exceptions all have passed the examinations of the State Nurses Board with creditable averages or high honors.

The Hospital has treated from 325 to 400 medical, surgical and obstetrical patients each year since 1906 with excellent results and has saved the people a large amount of suffering and expense.

One very pleasant feature of the work is that, whereas, during its earlier years the hospital encountered much prejudice and opposition it is now held in high esteem by nearly the whole community.

The community also has been greatly benefitted because a much greater interest has been aroused in sanitation and general health matters and the health of the people has been greatly improved.

HOUSEWORK THERAPEUTICALLY.

A fashionable London clergyman recently shocked his fair hearers by suggesting housework as a cure for many of their ills and ailments.

Woods Hutchinson, who delights in saying startling and unexpected things and in contradicting universal beliefs, says housework is responsible for many of the ills that beset the modern woman.

Both are right, in a way, and in specific instances; but to deduce general rules or conclusions one must study the modern woman and comprehend the nature of femininity.

Go away back to the first chapter of Genesis, and reread the account of the creation. You will find that woman was designed as a helpmate for man. A helper she was, and is; and she is never quite satisfied or in her true place unless she feels herself to be a helper. She must know she is useful, even essential, or she is dissatisfied. Surrounded by every luxury, pampered, indulged as to every whim, every wish anticipated, every possible desire gratified, and she languishes in discontent and unhappiness.

Many a time women with such surroundings have 'gone astray'; they have deserted their palaces to take up in comparative poverty with some fellow who abuses them and compels them to work for him. The student of abnormalities sees in these cases nothing but sexual influences. I venture the assertion that sexuality plays only a minor part in them. The true explanation is the unconscious impulse of the woman to be useful, to be a helpmate, and her 'fall' is an escape from abnormal conditions to those for which her being was designed, which her nature requires.

Women love luxuries. They keenly relish the good things of life. They take naturally and with avidity to fine clothes, jewels and other adornments, to servants, to freedom from labor, to artificial warmth, to the delights of seeing, hearing, knowing beauty. They love admiration, and drink in the voice of adulation. Yet all these are not quite what they live for, and they do not completely fill and satisfy their natures.

What will satisfy them?

Take the spoiled darling, the pampered creature sated and cloyed with a life of indulgence—and give her a baby to care for—to master her, tyrannize over her, compel her to do for him—and she shows on her countenance the complete satisfaction that can only be likened to the expression of a well-fed cow, standing in her

stall, chewing her cud.

It is not simply maternity that she requires, great as is her craving for it. Give a woman any number of children. Place them in the hands of hirelings, and she is dissatisfied. Seclude the little ones in the nursery, and put the mother in her drawing room, in silks and satins—clad with gems and gold bedecked, and she is not a happy or contented woman.

Take a bright, capable girl, make her a confidential secretary, stenographer, typewriter, let her feel that she is trusted and important, a necessary part of the machine, and she is the best assistant a man can have—faithful, efficient, contented and happy. Year after year she will work alongside the man, proud of her work and absorbed in her duties. She fits in exactly—and she has found herself.

Of course she will want a husband, and babies. Every normal girl must want them; but many and many a woman who has acquired her home and family, looks back in a few years with regret and longing to the useful position she held in the office. That more do not do so is because they find similar duties in their homes, duties that fulfill the instinctive need for helpful work.

Apply this therapeutically. Take the ailing, discontented woman, and before you suggest more luxuries and more rest, try the effect of finding some useful duties for her to perform. Let her plan and build a house; plant a garden; discharge her husband's secretary and assume the duties herself.

To avoid family jars—Start right. Associate the wife with you in your business in the way above indicated. The American woman is not and does not wish to be made a doll. She has brains and needs to use them. She has capacities and needs to develop them. She wants to be a helpmate to you, and while you may pile the wealth of Ormuz and the gems of Golconda at her feet, clothe her in the silks of Lyons and the plumes of Africa, make of her life one roseate dream of luxury, she will not be satisfied as she would if she sat opposite to you in your office and discussed your most important affairs with you. Try it.

FORTY-FIRST MEETING OF TRI-STATE MEDICAL ASSOCIATION OF OHIO, INDIANA, AND MICHIGAN.

The forty-first regular annual meeting of the Tri-State Medical Association of Ohio, Indiana, and Michigan was held in Elkhart, Ind. January 12-14, 1915, with an admirable program and a full at-

tendance of the membership from the constituent states. This is possibly the oldest and one of the strongest of the some eight or nine local district medical societies in the nation whose membership is drawn from two or three neighboring states, or the profession resident in certain districts. At times it has been suggested that there is scant need for the continuance of such district or Tri-State organizations, but there should exist only as large societies, state and national medical organizations. This view however, is in all probability erroneous, as there will doubtless continue to be states more closely connected by professional and social ties whose medical and surgical men will persist in finding enjoyment in such gatherings and who feel there is a community of purpose, and an identity of action in such societies that render membership in, and attendance upon, their annual sessions a source of both profit and delight.

THE GRADY HOSPITAL OF ATLANTA, GA., TO HAVE ROTATING STAFF.

Much interest, both within the ranks of the medical profession, and among the laity as well, has been evinced during some months past in Atlanta, Ga., over the vigorous protest of the Atlanta medical men who are not engaged as members of the teaching forces of the medical college there, over the exclusion of non-teachers from the staff membership of the Grady Hospital. Following strictly the lines of the famous Carnegie Foundation Report as enunciated by Dr. Henry S. Pritchett the Foundation President, in Atlanta, as elsewhere, there was manifest a strong and compelling influence to exclude all members of the profession except medical college teachers from staff appointments in the good hospitals.

Naturally the non-teachers resented this action in Louisville, St. Louis, Atlanta, and elsewhere. In Atlanta the non-teachers have just won a most signal victory, and by mutual concession the rotating of the hospital staff is arranged as it very properly should be, so as to afford its developmental influence upon the non-teaching medical men of the city as well as the college faculties. Beginning October 1st and retiring May 31st, the medical teachers will compose the staff, while during the other four months of the year, non-teachers will compose wholly the Grady Hospital staff.

The plan will possibly be open to the objection that possibly it is unwise to

wholly change the entire staff of a large general hospital on any given date, but this will be offset by the fact that a large city like Atlanta, has many strong and capable medical and surgical men who are not engaged in medical teaching, and who should have the benefit of the vast clinical material offered, and on the other hand, it will give the public an opportunity to receive treatment in the institution from the non-teaching class of practitioners.

PRELIMINARY PROGRAM

Tri-State Medical Association of the Carolinas and Virginia. Annual Meeting at Charleston, S. C., February 17 and 18, 1915.

Officers of the Association.

President—Dr. E. C. Register, Charlotte, N. C.

Vice-President—Dr. J. Allison Hodges, Richmond, Va.

Vice-President—Dr. Charles T. Harper, Wilmington, N. C.

Vice-President—Dr. F. H. McLeod, Florence, S. C.

Executive Council:

Dr. Jno. W. Dillard, Lynchburg, Va.

Dr. R. B. Epting, Greenwood, S. C.

Dr. D. A. Stanton, High Point, N. C.

Dr. James H. Culpepper, Norfolk, Va.

Dr. A. E. Baker, Charleston, S. C.

Dr. D. T. Tayloe, Washington, N. C.

Dr. W. W. Fennell, Rock Hill, S. C.

Dr. J. Howell Way, Waynesville, N. C.

Dr. Southgate Leigh, Norfolk, Va.

Place of meeting Assembly Hall of the Charleston Hotel.

Meeting called to order by the President at 10 a. m.

Invocation—Rev. Wm. Way, Rector Grace Church, Charleston, S. C.

Address of Welcome—Hon. Jno. P. Grace, Mayor of Charleston, S. C.

Response to the Address of Welcome—Dr. J. Allison Hodges, Richmond, Va.

Address of the President—Dr. E. C. Register, Charlotte, N. C.

Papers.

1. Surgery of the Oesophagus: With Report of Cases—Dr. Stuart McGuire, Richmond, Va.

2. The Organization of a Urological Clinic—Dr. Hugh Young, Baltimore, Md.

3. Report of Urological Cases Illustrating the Importance of a Thorough Examination—Dr. A. J. Crowell, Charlotte, N. C.

4. Needed Improvements in Vital

Statistics—Dr. Carl V. Reynolds, Asheville, N. C.

5. The Surgical Significance of Uterine Hemorrhage in the Non-Pregnant Uterus—Dr. J. F. Highsmith Fayetteville, N. C.

6. Moving Picture Illustrations of Nervous and Mental Diseases—Dr. T. H. Weisenburg, Philadelphia, Pa.

7. Our Changing Views of Infant Feeding—Dr. L. Emmett Holt, New York, N. Y.

8. Physico-dynamic Remedies in Every Day Practice—Dr. J. Madison Taylor, Philadelphia, Pa.

9. Treatment of Suppurative Appendicitis—Dr. Southgate Leigh, Norfolk, Va.

10. The Practical Surgeon's Attitude Toward the Abdominal Ptooses—Dr. J. N. Baker, Montgomery, Ala.

11. Primary Tracheal Diphtheria—Dr. E. W. Carpenter, Greenville, S. C.

12. Childhood Imperiled with Report of Case—Dr. J. Allison Hodges, Richmond, Va.

13. Exhibition of X-Ray Plates—Dr. Robt. A. Taft, Charleston, S. C.

14. The Nervous Mechanism of the Eyes—Dr. G. C. Savage, Nashville, Tenn.

15. Toxaemia in Its Relation to Mental Disorder—Dr. Jas. K. Hall, Richmond, Va.

16. Backache in Women—Dr. Jno. R. Irwin, Charlotte, N. C.

17. Diagnosis of Some Spinal Conditions—Dr. Tom A. Williams, Washington, D. C.

18. Importance of Early Recognition of Surgery Symptoms—Dr. J. T. Burrus, High Point, N. C.

19. The Milder Forms of Manic Depressive Psychosis—Dr. Beverley R. Tucker, Richmond Va.

20. Diarrhoea as a Symptom in Rectal Diseases—Dr. E. H. Terrell, Richmond, Va.

21. Varicose Veins in the Pelvis—Drs. C. M. Strong and Oren Moore, Charlotte, N. C.

22. Appendicitis and Appendectomy: End Results—Dr. Paul LaRoque, Richmond, Va.

23. Cervical Ribs—Dr. A. E. Baker, Charleston, S. C.

24. The Post Operative Backache—Dr. Chas. S. White, Washington, D. C.

25. "The Importance of the Tonsil as a Portal of Entry in Tuberculous Cervical Adenitis"—Dr. B. C. Willis, Richmond, Va.

26. High Blood Pressure—Dr. J. P. Munroe, Charlotte, N. C.

27. Gonorrhea Arthritis—Dr. Samuel Beall, Greensboro, N. C.
28. Pig Skin Gratts in Extensive Burns: Report of Case—Dr. Jno. W. Dillard, Lynchburg, Va.
29. Malignancy of the Ovaries: Report of a Case Complicating Pregnancy—Dr. Eugene B. Glenn, Asheville, N. C.
30. Goiter—Lantern Slide Illustrations—Dr. Addison G. Brenizer, Charlotte, N. C.
31. Obstetrics—Dr. D. A. Stanton, High Point, N. C.
32. "About Feeding Typhoid Fever Patients"—Dr. Stephen Harnsberger, Catlett, Va.
33. Anodynes and Anesthetics in Labor—Dr. C. A. Julian, Thomasville, N. C.
34. Unsuspected Tuberculosis—Dr. Thompson Frazier, Asheville, N. C.
35. Tuberculosis Hip Joint. Report of Case—Dr. Theodore Maddox, Union, S. C.
36. Suggestions as Regards the Relations of Health Officers to Tuberculosis—Dr. J. Howell Way, Waynesville, N. C.
37. Conservative Surgery in Genital Tuberculosis—Dr. Fred Potts, Spartanburg, S. C.
38. Five Years Work in the Treatment of Pulmonary Tuberculosis by an Artificial Pneumothorax—Dr. Mary E. Lapham, Highlands, N. C.
39. Removal of Safety Pin From Oesophagus—Dr. J. F. Townsend Charleston, S. C.
40. The Value of the Luetin Test in the Diagnosis of Syphilis—Dr. Frederic M. Hanes, Richmond, Va., Guest.
41. Treatment of Flat Foot—Dr. Wm. P. Mathews, Richmond, Va.
42. Fracture—Dislocation of the Spine: Report of a Case—Dr. M. L. Payne, Staunton, Va.
43. The Treatment of Typhoid Hemorrhage—Drs. D. W. and E. S. Bullock, Wilmington, N. C.
44. The Gastric Penalty of Financial Success—Dr. Matt O. Burke, Richmond, Va.
45. Moving Picture Demonstration of Orthopedic Cases: Deformities of the Foot: Arthroplasties; Paralytics—Dr. Michael Hoke, Atlanta, Ga.
46. Roentgen Ray Diagnosis of Duodenal and Pyloric Lesions. Lantern Slide Demonstration—Dr. J. W. Squires, Charlotte, N. C., Guest.
47. Closure of the Right Rectus Incision—Dr. Chas. R. Robins, Richmond, Va.
48. Preventive Medicine—Dr. L. G. Beall, Greensboro, N. C.
49. Demonstration of Endonasal Operation for Pansinusitis on Specimen—Dr. W. P. Reaves, Greensboro, N. C.
50. Eye Injuries and Their Treatment—Dr. A. M. Whisnant, Charlotte, N. C.
51. Enteritis—Dr. G. T. Sikes, Grissom, N. C.
52. The Use of the Twilight Sleep Remedies in the Treatment of the Drug Habit—Dr. W. C. Ashworth, Greensboro, N. C.
53. Liver Function with Reference to General Metabolism—Dr. W. T. Carstarphen, Wake Forest, N. C.
54. Treatment of Pellagra—Dr. E. H. Bowling, Durham, N. C.
55. Hernia of the Ovary, Tube and Omentum—Dr. J. W. Sloan, Richmond, Va.
56. Report of a Case of Virulent Mastoiditis without the Usual Signs—Dr. J. G. Johnson, Chester, S. C.
57. Tuberculophobia. Can it Longer Be Excused Clinically or Experimentally—Dr. L. B. Morse, Hendersonville, N. C.
58. Statistical Study in Serology—Dr. Robt. S. Preston, Richmond, Va.
59. Duodenal Ulcer—Dr. J. Kennedy Corss, Newport News, Va.
60. Crotalin in Treatment of Epilepsy, and Some Facts About Epilepsy—Dr. W. J. Chewning, The Plains, Va.
61. The Omentum as a Factor in the Causation of Diseases of the Abdominal Viscera—Dr. A. W. Moore, Charlotte, N. C., Guest.
62. Cause and Prevention of Feeble Mindedness—Dr. C. B. McNairy, Kingston.
63. Temperature in Tuberculosis—Dr. Wm. R. Kirk, Hendersonville, N. C.
64. Report of a Case of Pneumatia with Papillomato of Bladder—Dr. Lawrence T. Price, Richmond, Va.
65. Two Unique Cases—Dr. A. S. Townsend, Bennettsville, S. C.
66. Ludwig's Angina—Dr. J. A. Faison, Bennettsville, S. C.
67. Traumatic Rupture of the Spleen: Report of Two Cases—Dr. Murat Willis, Richmond, Va.
68. Diarrhoea in Infancy—Dr. Wm. P. Cornell, Charleston, S. C.
69. Salpingocystitis—Dr. J. W. Wallace, Concord, N. C., Guest.
70. The Local Treatment of Cancer—Dr. H. H. Bass, Henderson N. C.

Railroad Accommodations.

The visiting members of the Tri-State Medical Association will receive special railroad rates, the same that are usually

given for occasions of this kind.

The following arrangements have been made for a special pullman car from Charlotte, N. C., to Charleston, S. C., for the convenience of the members in this section of the country.

On February 16 the train leaves Charlotte at 5:05 p. m.

On February 17 the train arrives in Charleston at 7:30 a. m.

Returning.

On February 18 the train leaves Charleston at 5:15 p. m.

On February 19 the train arrives in Charlotte at 9:35 a. m.

At Charlotte the train makes good connection with trains going North. By way of Spartanburg members of the Tri-State Medical Association can get on the special cars at any time and go to bed after the train arrives in Columbia from Charlotte. Physicians south of Danville will arrive in Charlotte at 4:55 (local train) and Mr. DeButts has said that he will hold the train for Columbia until the 4:55 train arrives, in the event that it is late.

Without taking advantage of the special pullman car service in Charlotte, February 16th, the connections in Columbia will make the trip rather disagreeable on account of not being able to get to bed until possibly a late hour.

Please write Mr. R. H. DeButts, Charlotte, N. C., for reservations.

It is understood that special pullman cars will leave Richmond in the afternoon, or evening, of the 16th and arrive in Charleston early the next morning.

The Charleston Hotel will be the headquarters of the Association. This is one of the most magnificent and up-to-date hotels in the South, and the accommodations there will be first-class. While the Hotel is large and thoroughly capable of entertaining the Association, it will be well enough for those who want choice rooms to make reservations.

Entertainments.

On Wednesday afternoon the members will visit the Navy Yard through the courtesy of the Tourist and Convention Bureau. The cars will leave the Charleston Hotel at 3 p. m. and return at 6 p. m. This trip will include a visit to the large dry dock at the Navy Yard, Power House, Wireless Telegraph Station, as well as Machine, Wood Working and Boiler Shops. Mr. C. M. Benedict and Mr. W. W. Fuller of the Tourist and Convention Bureau will accompany the members on this trip.

Other entertainments will be announced later.

Editorial News Items.

Conduct of South Carolina State Insane Hospital to be Investigated.

Gov. Richard I. Manning, the recently inaugurated governor of South Carolina, has appointed Dr. A. P. Herring, Secretary of the State Lunacy Commission of Maryland, to examine into the conduct of affairs at the State Hospital for Insane in Columbia, S. C., and file with him for his guidance a detailed report of his findings, with recommendations, if need be, that will take the control and management of the state's unfortunates from the hands of politicians and insure their management on a basis wholly sound, scientific, sympathetic and with an eye single to the state's giving the proper care to its insane wards.

Dr. J. T. Strait, superintendent, who it will be remembered, only a year or two since, succeeded that most admirable and excellent medical gentleman, Dr. J. W. Babcock, as superintendent by appointment of Gov. Cole Blease, welcomed the investigation and authorized the newspaper statement that he desired the scientific investigation, and would co-operate with the Maryland Commissioner fully in affording every facility possible for getting full facts.

When it is recalled that our sister Carolina state was the first state in the Union to establish a state institution for the care of its insane at the state capital, we can but feel a warm interest in the forthcoming report, and trust it will show the general affairs of the institution have been better managed than political opponents in the heat and zeal of opposing interests, were quite willing to concede.

Dr. W. O. Spencer of the State Board of Health (N. C.) was a defendant in a novel suit in the Superior Court at Winston-Salem, N. C., last week. Dr. Spencer was charged with violating a local municipal ordinance relative to operating his automobile, and had appealed from the lower court. The jury found in favor of the physician which so incensed the presiding judge that in severely reprimanding the members of the jury, he said it was a matter of profound regret that he could not debar them from ever serving again on a Forsyth County, N. C., jury.

The North Carolina State Board of Health has a large and comprehensive plan for the campaign against tuberculosis which has lately been given to the state press and the legislature. It calls for an enlarged construction and maintenance appropriation, and as the plan has been presented to some of the state's wealthiest citizens and meets their approval, it is hoped to meet with substantial legislative support. During the past year, since the State Sanitarium for tuberculosis at Sanitarium, N. C., has been in charge of the State Board of Health, there has been a studied effort on the part of the authorities to enlist outside aid and support to the work, realizing that direct state appropriations sufficient to properly develop the work was not possible. As a result of such efforts, various lodges, societies, orders, churches, etc., have in whole or in part, paid the expenses of a number of indigent patients. With a view to popularizing and much farther extending the possibilities of the state anti-tubercular work in this direction, it is hoped to secure the active cooperation of a number of wealthy corporations who are expected to wholly, or in part, contribute buildings or standard style construction of course, on the ample grounds at the Sanitarium, for the use of their tubercular employees. It is understood the Governor and Attorney General have approved of the plans.

The Medical Society at Winston-Salem recently experienced a lively discussion at its recent session over the selection by the local authorities of a whole-time health officer who is said to be not a graduated physician, but who comes to the community from California with the highest recommendations as to his efficiency as a public health administrator. The present city physician, Dr. V. M. Long, has been asked by the aldermanic board to retire on February 1st to make way for the new incumbent who is not a physician, and in view of these facts, the local medical society appointed a committee to present all the facts to the board of aldermen and the farther views of the society that such positions should only be filled by competent men of approved medical education.

Dr. Leonard J. Pridgeon, Kinston, N. C., was elected S. G. W. at the recent annual communication of the Grand Lodge of Masons of North Carolina at Raleigh, N. C.

The Georgia State Board of Medical Examiners recently revoked the license of a practicing physician of that state for the "habitual and excessive use of intoxicants." This is one of the important functions of a state medical examining and licensing board that is infrequently exercised, but it is well that such power is conferred, and its exercise from time to time in suitable cases is unquestionably as much a board's duty as it is to license physicians.

Contracts have been let and the actual work of construction begins at once on the new fireproof wing to the Asheville, N. C., Mission Hospital. It will cost \$45,000.00 and will be modern in every respect and arranged especially for private patients.

Jackson County Medical Society elected the following officers for 1915:

President—Dr. A. A. Nichols, Sylva, N. C.

Secretary-Treasurer—Dr. Ed. J. Bryson, Cullowhee, N. C.

House of Delegates—Dr. Chas. Z. Candler, Sylva, N. C.

Dr. J. Frank Cranford has been elected health officer of Hendersonville, N. C.

The health authorities of Nash County, N. C., since the beginning of the school term last autumn have vaccinated 95 to 98 per cent. of all children of school age in the county.

Dr. M. W. Steel, with an experience of seven years in general practice and two years practical public health work under the Kentucky State Board of Health, assumed the duties of the whole-time county health officer of Scotland County, N. C., succeeding Dr. Absher who goes to Vance County, N. C., as its whole-time health officer.

Six North Carolina communities have now completed the full course as outlined by the Rockefeller Sanitation working in combination with the North Carolina State Board of Health; Salembur and Ingold in Sampson County, Red Oak and Mount Pleasant in Nash County, Philadelphus in Roberson County, and Hillsboro, in Columbus County. With notably few exceptions every person residing in these sanitary districts or communities, have been examined for hook-worm disease, and every infected person treated therefor. Every home, school and

church, has been provided with sanitary closets, and general sanitary advances have been very marked in each of these rural communities.

The North Carolina Society for Mental Hygiene held its annual session in Raleigh, N. C., January 9, 1915. Addresses were made by Dr. Wm. A. White, Washington, D. C., and Prof. Wm. L. Poteat, Wake Forest, N. C. Dr. White's address on "The General Meaning of the Mental Hygiene Movement" was instructive to a degree and was a forceful plea for advanced methods in the management and study of insane and the establishment of dispensaries in connection with every hospital for insane where the general public, and individual not regarded as insane could receive appropriate treatment. Rev. Geo. W. Lay, State Senator, Dr. Alfred A. Kent, Lenoir, N. C., and Dr. Jas. K. Hall, Richmond, Va., also addressed the Association, the latter stressing the thought the time would soon come when there would be no prisons, but merely places where individuals with disordered minds could be cared for. The old officers were re-elected for another year. Dr. Albert Anderson, Raleigh, N. C., is Secretary.

The Elizabeth City, Hospital (Elizabeth City, N. C.) was formally opened on January 7 by Dr. John Saliba, Superintendent, assisted by the other physicians of the city. More than three thousand guests were received during the day. In the evening the Pasquotank-Camden-Dare County Medical Society tendered a banquet in honor of the hospital management. Dr. C. B. Williams presided and a number of pleasing addresses were made, each speaker paying graceful tribute to Dr. John Saliba whose earnest labors made possible the erection of the handsome building. The hospital has cost in excess of \$50,000.00, and is regarded as one of the most complete in the state.

Dr. J. L. Napier, Blenheim, S. C., a former member of the South Carolina State Board of Health and ex-President of the South Carolina State Medical Society, celebrated his seventieth birthday recently with an elaborate dinner to his professional conferees and friends.

Morehead City, N. C. has voted bonds for the installation of a complete system of sewage which is expected will be finished in ample time for the opening of

the summer season at this deservedly popular North Carolina resort.

Mr. Wm. J. Bryan, Secretary of State, made a masterful address at the recent session in Raleigh, N. C. of the Social Service Congress for North Carolina dealing effective arguments before the state legislature and other assembled thousands in favor of advanced public health legislation and other lines of material and intellectual development.

In the Superior Court of Haywood County, N. C. was concluded on January 30, one of the most stubbornly fought damage cases engaging the attention of N. C. Courts for some time. Dr. Eugene B. Glenn, a well known Asheville, N. C. practitioner was sued by a Mrs. R. L. Hoke, of Canton, N. C. for \$20,000.00 damages jointly with the Biltmore Hospital. The court dismissed the issue as regarded the liability of the institution early in the case. The plaintiff alleged that in November 1912 the defendant removed her uterus for multiple fibroids, her right ovary and tube, her appendix, and her left tube with a portion of the left ovary. She recovered slowly and in March, 1913, passed a piece of gauze 30 x 15 inches in size per rectum. Later Dr. J. M. T. Finney, Baltimore, opened her abdomen and reported a minimum amount of postoperative adhesions, and no evidence (according to his deposition) of the passage of said piece of gauze from the plaintiff's abdomen. A number of well known Asheville, Canton and Waynesville physicians were introduced by the defendant. The jury returned a verdict for Dr. Glenn, exonerating him from all damages, and awarding him \$150.00 for operating on the plaintiff.

On January 22, 1915 at the residence of his father in Durham, N. C. Dr. Roy Vaughan died. Dr. Vaughan, while one of the younger men of the profession, having graduated from the Medical College of Virginia in 1909 and securing license from the North Carolina State Examining Board the same year, was greatly beloved in the circle of his growing clientele, and developing into one of the type of general practitioner of medicine that living in the memory of the community has given our profession, perhaps more than any other, a peculiar claim on the word "beloved." Peace to his memory.

Dr. Daniel E. Seveir, Asheville, N. C. was on January 11, 1915, elected to succeed himself as Whole-Time County Health Officer for Buncombe County at a salary of \$2,000.00 per annum.

Dr. I. E. Green, Weldon, N. C. was re-elected county physician of Halifax County January 4, 1915.

Dr. C. S. McLaughlin, Charlotte, N. C. was re-elected county physician Mecklenburg, January 11, 1915 for a term of two years.

On the night of January 11 at Asheville, N. C., the automobiles of Drs. J. G. Anderson and G. D. Gardner, while going in opposite directions collided, with the result of the former sustaining severe injury to his automobile and some minor bruises to his person.

Dr. R. S. McElwee, Statesville, N. C. has been elected county physician to Iredell county.

Dr. A. P. Willis, Canton, N. C. announces his removal to Candler, N. C. where he will continue in general practice.

Dr. R. M. Grim of the United State Public Health Service, has arrived in Spartanburg, S. C. and assumed control of the work of the Federal Government Hospital for Pellagra established some time ago in that city, relieving Dr. A. B. Herring of the service who is by the same order transferred to duty at New Orleans. Dr. Grim is gladly welcomed to a continuance of his studies in pellagra, pathology and therapy, having formerly spent much time in this work in Spartanburg and vicinity when the United State authorities began this investigation several years ago.

The Tarrant County, Texas, Medical Society elected the following officers at a recent meeting held at Fort Worth on December 4:

President—Dr. J. A. Gracey.
Vice-President—Dr. C. O. Harper.
Secretary—Dr. James J. Richardson.
Treasurer—Dr. W. R. Thompson.

The Tuscaloosa County, Ala., Medical Association elected the following officers at its annual meeting:

President—Dr. J. E. Shirley.
Vice-President—Dr. H. B. Searcy.

Secretary—Dr. J. H. Somerville.

The Bell County, Texas, Medical Society at a recent meeting at Temple elected the following officers:

President—Dr. J. J. Terrill.
Vice-President—Dr. E. D. Maloy.
Secretary and Treasurer—Dr. L. R. Talley.

The Dallas County, Texas, Medical Society at a recent meeting elected the following officers:

President—Dr. W. C. Swain.
Vice-President—Dr. J. D. Watson.
Secretary—Dr. R. S. Loving.
Board of Censors—Drs. W. T. Baker and C. R. Hannah.
Delegate to the State Society—Dr. W. A. Boyce.
Alternate—Dr. A. B. Small.

Dr. J. W. Norwood of Bethune, S. C., has removed to McBee, S. C.

The Montgomery County, Tenn., Medical Society, at its recent annual meeting elected the following officers:

President—Dr. W. R. Newton.
Secretary and Treasurer—Dr. R. B. Taylor.

The Athens, Ga., Medical Society at its December meeting elected the following officers:

President—Dr. S. S. Sisk.
Vice-President—Dr. J. C. McKinney.
Secretary and Treasurer—Dr. H. I. Reynolds.
Censor—Dr. S. S. Smith.
Delegate to the State Association—Dr. J. C. McKinney.
Alternate—Dr. R. P. Glenn.

The Jefferson County, Texas, Medical Society elected the following officers at its meeting at Beaumont on December 7:

President—Dr. E. C. Ferguson.
Vice-President—Dr. W. E. Tatum.
Secretary—Dr. B. P. Holland.
Censor—Dr. E. C. Moody.
Delegate to the State Society—Dr. D. S. Weir.
Alternate—Dr. O. S. Hodges.

The Miriam County, Texas, Medical Society at Cameron on December 9 elected the following officers:

President—Dr. E. E. Bert.
Vice-President—Dr. W. R. Newton.
Secretary and Treasurer—Dr. R. B. Taylor.

A mountaineer of the Blue Ridge, a dissipated stove tinker, had a wife who frequently attempted suicide, following the example of two of her brothers, who hung themselves.

In one of her attempts she used an old leather strap, which broke, as she jumped out of the barn window, after tying the other end to a rafter.

On the next occasion, she picked up a buggy bridle, and proceeded to hang herself. Her husband made no move to prevent her, he simply called out, "Now won't you look pretty walking the streets of the New Jerusalem, with a blind bridle on?"

The thought of this hed gear, worn in a strange place, was too much for her feminine mind and she desisted.

Then her "old man" got on a spree, and told her to wait, and that he would get her something that would do and that would not break, so he went to town and bought a nice new rope, and gave it to her, and she never made another attempt.

C. W. Hunt, Brevard, N. C.

Reprints Received.

Important Factors in the Successful Performance of Operations on the Gall-Bladder and Bile Ducts, by F. C. Floeckinger, M. D., Taylor, Texas. Read at the Seventh District Medical Meeting.

Median Transverse Fascia Incision, by F. C. Floeckinger, M. D., Taylor, Texas.

Important Factors to Be Considered in the Diagnosis and Treatment of Carcinomata of the Breast, by Dr. F. C. Floeckinger, Taylor, Texas.

Some Observations Made in Atypical Cases of Mastoiditis, by George W. MacKenzie, M. D., Philadelphia, Pa. Reprinted from The Journal of Ophthalmology and Laryngology.

Diaphragmatic Hernia With Report of a Case, by Stuart McGuire, M. D., Richmond, Va. Reprinted from The Southern Medical Journal.

Diaphragmatic Hernia—Report of a Second Case, by Stuart McGuire, M. D., Richmond, Va.

Evolution of the Treatment of Ectopic Pregnancy, by Stuart McGuire, M. D., Richmond, Va. Reprinted from The Southern Medical Journal.

The Profit and Loss Account of Modern Medicine, by Stuart McGuire, M. D., Richmond, Va. Reprinted from The Southern Medical Journal.

Parotid Ablation and Pluriglular Insufficiency.

Neri has shown by experiments on dogs and rabbits that following extirpation of the parotids there are structural changes in the thyroid, ovaries, testicles, pancreas, suprenals, spleen, and kidneys. These changes consists at first in a diminution in the tinctorial reactions, and later in an involution and atrophy of the respective organs with an intra- and extracellular fatty infiltration.—Giornale Internazionale delle Scienze Mediche.

Abstracts of the Leading articles of the month.

Unjust Criticism.—The following is a very appropriate editorial comment that recently appeared in the Journal-Lancet.

When medical men cease to be critical, the medical profession will have reversed its gear. Equally true is it, that, when medical men criticise thoughtlessly and unjustly, they are putting sand in the profession's "gear-box."

The Journal-Lancet receives not a few letters that readily fall into one or other of the above categories. The editor welcomes such letters, and hopes they will not cease to come. He will sort them according to their merits as determined by his light. At this time he wants to deal with the unjust class.

Within a few weeks, as occurs in almost any few weeks of every year, a number of sensational medical articles have appeared in the daily papers of the Northwest; and the names of highly reputable medical men have been used in such articles in a manner that makes these men appear to be sensational advertisers. Such articles bring letters of protest to our desk. This is right and proper; and we should regret a failure to receive them. But it must be remembered that it is not an uncommon thing for some daily papers to open an interview in this style:

Our reporter called on. — yesterday afternoon as the sun was going down to ask his opinion of the value of "twilight sleep"; and his views, so freely and clearly expressed, will be of interest to our readers, and possibly of value to our lady friends. He said, etc.

What he said has additional value, of a certain kind, to the medical profession when it is learned the Dr. — was in Europe at the time of the "twilight" interview; or it is not impossible that Dr. — was only a veterinarian.

Is any less harm done to a physician and to the public by distorting views expressed by such physician in a medical society, and publishing them as an interview, openly stated or made to appear as such? We think not.

What follows such a publication? Letters of protest to the editor of the medical journal supposed to take cognizance of such things. This is very proper; but let it not be forgotten that a physician's reputation is at stake. If such name appears often in the public press, and other circumstantial evidence goes to prove that the physician mentioned enjoys such things, and pays for them, suspicion cannot fail to attach to such name.

Under almost and circumstances, the lay paper is a dangerous place for the frequent, or even the occasional, mention of a physician's medical opinions or acts; and therefore suspicion is a just penalty upon the man who does not keep his opinions and acts out of lay papers.

Chronic Recurrent Diarrhea in Children.—Poynton, Armstrong and Navarro, (British Journal of Children's Diseases,) says that mal-absorption is clearly a predominating feature in these illnesses, and we need not delay over the infantilism or extreme weakness of the lower extremities, or flatulent distention and general flabbiness and anemia, for we think this is a sufficient explanation. It is an interesting point that a considerable number of cases after reaching the age of five to seven seem in a mysterious way to outgrow the tendency to recurrent attacks, and to gain, step by step, a tolerance to a more generous diet, and one wonders in such cases to what extent the bowels remain permanently damaged, and whether the liver or pancreas or both acquire in some way, a greater vitality, and thus aid in overcoming the celiac element.

The problem of the diet seems to us a very difficult one, for a study of their cases, and of others they have not recorded, seems to point to any of the chief articles of diet as being at one time or another harmful, although they think Herter inclines to the carbohydrates as the first offenders. Fat seems to stand first as the most difficult, yet some cases

may take cream. Carbohydrates may be tolerated better than any foods at times when the condition is almost desperate, but often they are ill-borne, and if pressed appear to assist in causing distention in which the entire bowels is implicated. Broths and meatjuices are, perhaps, as likely to be dealt with successfully as any food, but with milk the most diverse results occur. In some cases milk seems most injurious, in others it has been the great standby. The dried milks have often been of service. Eggs are frequently disastrous, and again fish has been most unsatisfactory, and minced meat equally so. The copiousness of the stools are a proof of intestinal diarrhea. The widespread intestinal lesions prepare us to find that all forms of food may be difficult to assimilate. With them, in fact, it has been that in some cases a diet has been arrived at by bitter experience with the particular individual, and has been evolved quite empirically. They add that diarrhea is by no means an invariable symptom, for there may also be constipation, which may prove equally dangerous from consequent meteorism. Of all drugs, the one that seems to the authors after a prolonged experience to be the most generally successful is bismuth. They have had the most convincing proof of this in the fact that several mothers of much intelligence and unsparing in care of their children have come back asking for this when a relapse was threatening.

They do not pretend that it will cope with the worst cases, but it is, they believe, of the greatest value in the milder ones, although it is powerless to combat an unsuitable diet. Opium and gray powder have, as is well recognized, their times of value; and when the stage of convalescence is well established mild iron preparations are useful. The routine use of cod-liver oil and malt in the stages of remission may, in their opinion, precipitate an attack.

The remarkable tendency to great abdominal distention and the diagnosis in some of these cases of dilated colon raise the interesting question as to whether a condition allied to Hirschsprung's disease, or, indeed, whether some cases actually described as of this nature, are not to be ascribed to this peculiarly severe and chronic affection damaging the neuro-muscular elements of the bowel. The course of events one would picture (then, is that the active disease has quieted down, leaving a much weakened gut, and constipation

has resulted. This constipation has been neglected or permitted at first as a lesser evil, and thus added to the strain upon the weakened bowel, with the result that an extreme degree of atony of some of the most affected parts has resulted.

Benzol in Leukemia.—Lewison (Interstate Medical Journal) gives the following conclusions:

1. Benzol is a symptomatic remedy of great value in leukemia.

2. The action of benzol is not restricted to certain types of leukemia.

3. The dosage should be from 3 to 5 gm. daily. It should be given mixed with olive oil or milk to lessen the irritation of the stomach. It should be given when possible after meals.

4. Benzol may produce symptoms of gastrointestinal irritation, such as burning, flatulence, nausea, and vomiting. Dizziness, albuminuria, bronchial irritation, and mucous membrane hemorrhages may occur.

5. When benzol is not tolerated by mouth, it may be tried subcutaneously or per rectum.

6. Benzol first causes an increase in the white blood-cells, and then a marked fall. This drop may go below normal, and even to a complete absence of white cells if the use of benzol is unduly prolonged.

7. The administration of benzol should always be stopped before the white cells reach a normal figure.

8. Benzol in moderate doses has a favorable effect on the red blood-cells and hemoglobin.

9. It is better, when possible, to combine the use of benzol with the X-ray.

10. Benzol has a favorable action to a limited degree on some types of pseudo-leukemia.

Are We Exaggerating the Dangers of High Pressure?—Tom A. Williams, M. B., Washington, D. C., Critic and Guide, November, 1914. High arterial tension is not itself a great danger, but the agent which produces it is. The author attributes it to hyperproteosis. And the cause of this is the failure of the organism to deal with an excess of protein. Cases are reported showing the efficacy of treatment which limits the proteins and increases metabolism by proper dietary means. Not all the cases show arteriosclerosis, or high blood pressure. Vertigo paresthesia, lumbago recurrent headache or a thick dull feeling with incapacity

to concentrate, or wakefulness and irritability, or melancholy may be the chief signs. Alcohol is of little importance in the etiology, except in cases where it produces hepatic or renal insufficiency. Any pressure above 120 is abnormal, even though usual in older people. Anxiety and strain are merely subsidiary factors.

Simple Method for Quantitative Determination of Glucose.—Dimmock (British Med. Jour.) gives his simplified method in the following words: The urine is diluted twenty times, that is, ten c. c. of urine is measured and poured into a 200 c. c. flask; this is made up to the 200 c. c. mark, and the whole well shaken. A solution of potassium carbonate, two ounces to six ounces of distilled water, is filtered and made up to eight ounces. To twenty c. c. of the diluted urine ten c. c. of the potassium carbonate solution are added in a small flask, boiled carefully for three minutes, and when cool made up to a definite amount, say fifty or 100 c. c. with distilled water. In order to estimate the amount of sugar present a solution of pure glucose is prepared, one gram in 200 c. c. of distilled water; twenty c. c. of this and ten of the potassium carbonate solution are boiled together in a small flask for three minutes, and when cool made up to fifty c. c. or 100 c. c. The two solutions are then compared by holding the glass tubes over a piece of white paper at an angle of forty-five degrees. By pouring the liquid from the known solution into a measure glass until the tints of both are alike, and observing the amount of the known glucose solution used, the percentage can be readily determined. For example, if twenty-seven c. c. of the pure glucose solution was required for the solution, then, multiplying by two, we obtain 5.4 as the percentage of glucose in the urine. It is the hope of the writer that it will be possible to prepare a colored glass test object for comparison with the unknown urine. Of course it is necessary to remove the albumin from the urine by the heat and acetic acid before the test is made. The urinary pigments seem to have no effect, but these could be removed easily by precipitation with lead acetate and filtration.

Modern Aspects of Certain Problems in the Pathology of Mental Disorders.—(London Lancet) Goodall says that both observations recorded by others and those made by myself or my colleagues are drawn upon for the deduction of the conclusions given. In the first place it seems

proved that in clinically certain cases of dementia paralytica the Wassermann reaction may be negative at a given examination when the usual amount of the patient's amboceptor is used. This is true of both blood serum and of spinal fluid. Even in pronounced cases the reaction may be negative from time to time. In stationary periods, it is frequently negative. In spite of these facts it is found that there is no relation between the reaction and the presence of a state of remission, positive and negative reactions being obtained during remissions with equal frequency. When the amount of the patient's amboceptor is increased from the usual 0.2 c. c. to 0.6 c. c. over, there is a considerable increase in the proportion of positive reactions. Thus in thirty-six per cent. doubtful reactions in dementia paralytica were converted into positive reactions by this increase. An increase in positive reactions of only five or six per cent. was, however, recorded in cases other than dementia paralytica. A comparison of the frequency of positive Wassermann reactions in dementia paralytica with that in other mental disorders shows that a positive reaction with 0.2 c. c. of amboceptor can be regarded as indicative of the former condition, but a negative reaction with any amount of amboceptor does not exclude this disease, unless repeatedly obtained. In remissions or in slowly progressive cases the Wassermann test is not trustworthy for differentiation between dementia paralytica and cerebrospinal syphilis. The estimation of the protein in the spinal fluid by the Nonne-Apelt method is more often positive than the Wassermann test in general paralysis, and is better in revealing the nature of the disease during remissions. It also occurs, however, more often in other forms of mental disorder. Abnormally high nitrogen content of the fluid and an abnormal density commonly run parallel in dementia paralytica, but not in other conditions except in senile and terminal dementias. It seems possible that the nitrogen test may be found to be the most accurate means of foretelling the presence, the approach, or the disappearance of anabolic or catabolic processes in the central nervous system. An increased cell percentage in the spinal fluid is also more often obtained in certain cases of dementia than in the Wassermann, but, like the protein and nitrogen tests, it is less specific in doubtful cases.

The Healing Process of The Infantile Bronchial Gland Tuberculosis.—Rist (Edinburgh Medical Journal.)

Says that enlargement and caseation of the bronchial and mediastinal glands, the most conspicuous morbid change observed in children is always caused by and consecutive to an initial tuberculous lesion in the lung itself. The pulmonary focus is often so small that, postmortem, it can only be detected after a most painstaking investigation. The majority of these children whose bronchial and mediastinal glands are tuberculous recover and grow up to be the average healthy adult. Yet, among those who recover, an important percentage are re-infected later on, and become the young or adult consumptive. The differences between the lesions of the bronchial glands in the child and the adult are very striking. In the adult, bronchial glands of normal size or hardly enlarged, are found coincident with extensive tuberculosis of the lung. In 400 adult cases of pulmonary tuberculosis, caseation of the bronchial glands was found in only 3 cases and they were young individuals. Scars of healed tuberculous lesions are to be found in a small number of glands in each adult case, and they occupy a part only of the gland, the rest of which is sound or nearly sound, and reacts normally to disease affecting the lung territory to which it corresponds. The comparative study of glands at different stages of the healing process shows that this scar tissue is formed by bundles from the peripheral fibroid tissue penetrating the central caseous mass. During this healing process, which requires a long time, the tuberculous follicular formations, which are a characteristic feature of the peripheral fibroid part of the caseous gland, gradually disappear. Rist concludes that caseation of the bronchial glands is not a specific charter of childhood, but of primary tuberculous infection. If, on the other hand pulmonary tuberculosis of the adult is, as a rule, not accompanied by caseation of the corresponding bronchial glands, it is not because the lymph glands of the adult are essentially and physiologically different from those of the child, but simply because pulmonary tuberculosis of the adult is due to a re-infection.

Artificial Pneumothorax.—Woodcock and Clark (British Medical Journal) say for the more advanced cases one day of rest in bed is enough before the first operation. For the prevention of shock the

patient should receive hypodermic injections of quinine and urea hydrochloride and of morphine and atropine the night before, and immediately preceding the operation the site should be anesthetized with an injection of novocaine and adrenaline so given as to anesthetize both the skin and the deep tissues. Following this another injection of quinine and urea hydrochloride should be given. Unless contraindicated by the presence of pleuritic adhesions, the injection of gas should be made in the middle axillary line at the level of the nipple. Otherwise it is given in some suitable resonant area. In the early unilateral cases the operation is easy, but is likely to be associated with severe shock, and every possible precaution against this occurrence should be observed. In extremely nervous patients one should only go as far as anesthetizing the site on the first occasion, proceeding to the actual insertion of the needle on the second, and giving gas only at the third sitting. Where gas can be given at the first sitting, as much as 300 c. c. can be injected in the manometer shows an oscillation of an inch. If there is any doubt as to the proper insertion of the needle not more than thirty c. c. should be injected. Following the injection the patient should lie still for half an hour, and then be returned to bed. Even under all of these precautions shock is occasionally observed in this type of patient, and the escape of a little gas through the needle is the most immediate way of relieving it. In cases of moderate severity the shock is far less marked owing to the presence of pleuritic adhesions and the consequent reduced liability of the heart to displacement. In these cases the first injection should not exceed fifty c. c. of gas and not more than three inches of water pressure should be employed for its introduction. In severe cases of bilateral disease the dangers are no longer those of shock, but result from the possible reduction of the remaining lung space to a point below that required for life. But even in these cases pneumothorax sometimes gives the patient his only remaining chance of life. Only in cases of dangerous hemoptysis can the preceding precautions be disregarded, and here the injection of gas should be made at once and in amounts sufficient to control the bleeding, even up to 1,800 c. c. at the first operation. These directions and precautions are the result of an experience of over 2,000 pneumothorax operations conducted by the authors.

Physician's Liability for Negligence of Hospital Nurses.—(According to the Medical Record) an action was brought against the plaintiff's family physician, by whose advice she went to a public hospital for a surgical operation. After the operation she was burned by a hot-water bottle that had been left by a hospital nurse in the bed in which she was placed. It appeared from the testimony that the defendant was a member of the associated staff of the hospital and had the privilege of sending patients there for treatment either by himself or by the regular hospital physicians and surgeons; that he agreed for a stipulated sum to perform the operation, but the hospital expenses were to be paid by the plaintiff, to whom he gave a letter of introduction that secured her admission to a private room in the hospital; that she was prepared for the operation by hospital nurses under the direction of the directress of nurses, and etherized by a physician employed by the hospital for that purpose; that she was operated upon by the chief hospital surgeon, assisted by the defendant, and was removed from the operating room to the recovery room by hospital nurses and the physician who had etherized her; that a bed in the recovery room had been prepared for her reception by warming it with three hot-water bottles, one of which had not been removed therefrom, and was hidden from view by blankets which covered it; that the defendant followed the nurses and the etherizer into the recovery room and stood near the foot of the bed when the plaintiff was placed in it; that in the operating room the nurses were in charge of the surgeons, but in the recovery room they were under the direct, immediate, exclusive control and management of the directress; that the duty of preparing the beds in the recovery room and placing the patient therein rested entirely with the directress and the hospital nurses under her charge, and that the surgeons had nothing to do with it, and that this was the general rule in hospitals. It was held that the injury was caused by the negligence of a hospital nurse, for whose service the plaintiff paid the hospital, and whose work the defendant would not have been permitted to supervise and for whose negligence he was not responsible. —*Stewart vs. Manasses*, Pennsylvania Supreme Court, 90 Atl. 574.

Sugar as an Oxytoxic.—Roig (*Revista de Medicina y Cirugia Practicas*) gives these properties as those which most

characterize the ideal oxytotoxic and by the approach to which we must judge any proposed as an oxytotoxic: (1) It must not be very toxic; (2) it must respect the normal rhythm of the uterine contractions and not produce a state spasm; (3) it must not interfere with the normal expulsion of the placenta; (4) it must not harm the child either by tonic spasm of the uterus, by separating prematurely the placenta and causing haemorrhage, or by any direct toxic action exercised through the blood; (5) it must act promptly—the quicker its action the better the effect; (6) its action must cease with the birth of the child, and its elimination must be rapid, and no toxic derivatives must appear in the mother's milk; (7) it must act most strongly during the first stage of labour. The author considers the action of sugar as an oxytotoxic comes nearer to this ideal than many of the more frequently used drugs. It was first used by C. Keim, of Paris, in 1898. Its action seems to be essentially physiological. Sugar is a muscle food—the source of muscular energy. There is in the system of the pregnant woman at term an unusually large quantity of sugar. Some of it is required by the mammary glands. The state of the liver, the hypertrophy of the suprarenal capsule and the hypophysis all contribute to the excess of sugar in the system. At the beginning of labour the uterine muscle and blood is saturated with sugar, which suffices in a labour of normal duration. In delayed labour, however, the supply may be insufficient; under various circumstances the amount of sugar produced may be diminished, and may have as a result abnormal weakness of the uterine muscle. In his first communication Dr. Keim advocated the administration of sugar in the form in which it is secreted by the mammary glands. Afterwards, however, he found that ordinary cane sugar acted as well or even better, as it was more quickly absorbed, and was much more easily obtained at any time and in any place. It should be given in small doses, frequently repeated, and in concentrated solution, between meals; 25 grams of sugar, dissolved in half glass of water, may be repeated several times at intervals of half an hour. Sugar as an oxytotoxic has its most suitable application towards the end of labour, when there is no mechanical obstacle to the expulsion of the fetus and where the delay is due simply to uterine inertie.

Practical Points in Abdominal Surgery.

—Dalziel (Glasgow Medical Journal) considers ulceration of the stomach a serious condition and fatal hemorrhage occasionally follows it. He is of opinion that operation is indicated in recurrent hemorrhage. Temporary hyperacidity of the stomach may follow indiscretion of diet and this condition is intensified by undue retention of the food in the stomach. Alkalies and modification of diet have helped some cases. Tumors of the stomach are for the most part malignant, sarcoma being rarely seen. The symptoms of carcinoma may be extremely vague. There may only be a slight loss of appetite with a gradual inability to take much at any time, accompanied by a gradual loss of weight and strength. The treatment is surgical and should be as radical as circumstances will permit. Chronic interstitial enteritis is characterized by violent colic, vomiting, occasionally escape of blood from the bowel, and constant presence of mucus in the stool. These symptoms recur at intervals and during the attacks of pain there may be a slight rise of temperature. The prognosis is bad and the condition demands surgical interference, resection of the part of the intestine chronically inflamed and thickened being performed. The cases somewhat resemble tuberculous enteritis, also Johne's disease, in which an acidfast bacillus similar to the tubercle bacillus has been found but which does not cause tuberculosis when injected into guineapigs. The etiology of the condition is obscure. Intraabdominal adhesions occur mostly at the four corners of the abdomen. They may be the cause of enteroptosis as the result of chronic constipation. At times, on account of the obstruction produced, blood and mucus appear in the stool and when on examination a mass is felt, the diagnosis of malignant growth may be made. The treatment is surgical.

Solid Teratoma of the Ovary.—Falco

(Ann. di Ost. e Gin) has made a study of the malignancy of teratoma of the ovary in literature, apropos of a case operated on by him. The patient was operated on for an ovarian tumor which was shown by histological study to be a teratoma. Four months later she came again to the hospital with a return of the tumor in the ovarian region and nodules in the peritoneum and mesentery. The second operation showed that the tumor was not entirely removable, and the patient died forty days later of the cachexia

resulting. Examination of the specimen showed tissues belonging to both the mesoderm and ectoderm. There were myxomatous connective tissues, fibrous, embryonal, adipose and cartilaginous tissues and unstriated muscular fibers. Also from the ectoderm epidermis with sebaceous glands and structures resembling thyroid. The author finds ninety-three reported cases of teratoma. The genesis of teratomata is as yet uncertain. The theory that there is an ovarian pregnancy is of only historical interest. An ectodermic invagination does not fit the author's case etiologically. The principal facts to be considered are the terdemic structure, their presence in men and women both, and their preferred location in the genitals. Parthenogenesis has been given as a source of such tumors, but this is as yet not demonstrated even in the lower animals. Fetal inclusion while suitable to explain some teratomata is not a plausible explanation of all. The cystic teratomata are generally regarded as benignant, while the solid are malignant, as was the author's case. The tumor is never correctly diagnosed because it shows no typical symptoms, not common to all ovarian tumors. Operation only shows the kind of tumor with which we have to deal. Thus the prognosis must always be reserved in such cases. The symptoms caused are principally due to pressure on the other organs of the abdomen and pelvis. The degree of malignancy seems to be less than that of carcinoma, for the tumors grow to a much large size without causing a cachexia that is fatal. The author's case shows that recurrence in other organs and structures may take place. His conclusions from his study are these: Solid tumors of the ovary of teratomatous nature are malignant as is shown by the histological examination. Their diagnosis is generally impossible, and only operation can give any hope of cure. No cases of spontaneous cure are known. Both solid and cystic teratomata are probably due to inclusion of fetal tissues, or development of a twin embryo.

Parovarian Dermoid Cysts.—Vautrin (Bull. de la Soc. d'obst. et de gyn. de Pais) says that dermoid cysts are as frequent in the parovarian region as in the ovary itself. In order of frequency we encounter them in the ovary, parovarium, vesicouterine serous folds, on the posterior surface of the broad ligament, in the pelvisacral region, and in the pelvic floor. The parovarian are generally near the

hilum of the ovary. They take on a development under the serosa about them and at the side of the uterus which they crowd upon. The evolution, complications and therapeutics of the parovarian differ from those of the pelvic floor. He has operated on eighteen simple parovarian dermoids, and five bilateral ones. If the parovarian dermoid remains sessile it is in contact by one pole with the serosa and by the other with the numerous vessels of the ligament. Sometimes it becomes entirely surrounded by serosa and forms a pedicle, which may be twisted or ruptured. It may separate the vascular and lymphatic elements and infiltrate deeply between the uterus and pelvic wall. These tumors are frequently bilateral. The preferred location is at the periphery of the ovary. The ovary irritated by its nearness to the cyst, becomes modified in structure and function. Still the dermoid can always be separated from the ovary with which it is associated. Menstrual troubles may result from the modification of the ovary, and abortion has been the result. Sterility is absolute when the follicles become atresic. After being quiet for some time the dermoid under some unknown impulse may begin to develop rapidly in size, and this may occur after the menopause, causing congestion, inflammation, and degeneration to take place. Its size may drag the tumor and ovary down into the pelvis. These tumors are subject to adhesions to the intestine and perforation may occur. The complications are serious: they are torsion of the pedicle, suppuration, and infection. Infection occurs in the course of infectious diseases and by the streptococcus, straphylococcus, colon bacillus, and bacillus of Eberth. They reach the dermoid by contact, by adhesions, and by the blood current. Every dermoid cyst should be considered dangerous on account of the ease with which it fixes infective agents. The size increases, much fluid and many leukocytes enter the tumor, and the tissue softens. Degeneration may be malignant. If the dermoid is still quiet and has had no bad effects enucleation is easy. It should be conservative so as to preserve the genital function. If the growth is intraligamentous it will be difficult to separate from the surrounding structures. Suppuration is a very serious complication because rupture will cause peritoneal infection. We cannot puncture and aspirate for we may cause rupture of the cyst. Every adherent dermoid should be feared as operation will be difficult.

Retention of the Membranes After Labor at Term.—Guidal (Arcr. mens. d'obst. et de gyn) says that as a basis for his study of the subject of the retention of membranes after normal labor he has searched the records of the Maternity at Copenhagen for the years 1903 to 1912 during which time there were 14,078 deliveries, in 346 there was retention of the membranes, that is in 2.5 per cent. The percentage in other countries varies according to statistics between 20 and 1 per cent. Crede showed 4.8 per cent. after his form of expression. At Copenhagen the uterus is controlled after delivery for a half hour. If delivery has then not taken place the Crede expression is used. If not successful, anesthesia is induced and expression continued; then artificial delivery is resorted to. During the puerperal condition the treatment is purely symptomatic; hemorrhage is treated by ergot, pain by hot applications, and fetid lochia by vaginal doucres of chloride of lime. Hemorrhage was never severe. There is some risk if infection. Passive conduct is advocated in Germany, but active measures are used in France and England. In 32 cases there was elevation of temperature of extragenital origin, and in 119 there was fever of obstetrical origin. Thus we see that retention of the membranes is a risk of infection. But one-half of these infections were very slight. If no active interference is undertaken the membranes come away piecemeal or in imperceptible particles which pass away in the lochia. He concludes that the treatment during delivery plays an etiological role in the retention of the membranes and it is favored by active intervention. It is more frequent when there are placental anomalies. It does not cause hemorrhage during delivery. The percentage of morbidity is somewhat increased by retention of the membranes, but this cannot be entirely prevented by removal of the membranes artificially. The membranes will normally be removed molecularly or in pieces within ten days. This may be one of the causes of endometritis.

Incontinence of Urine in Women.—Newman, in The London Lancet, has successfully performed in a considerable number of cases described as follows: The patient may be placed either in the lithotomy or in the knee-chest position. The posterior wall of the vagina is fully depressed so as to expose the anterior wall fully in view. The bladder is distended with 12 ounces of boric acid solution. A

straight steel bougie No. 14 with a knob of the size and shape of a horse-bean half an inch from its point, is introduced into the bladder, at first fully and then partly withdrawn, so that the knob comes down to and locates the neck. By elevating the handle of the bougie the knob is made to throw out the posterior wall of the bladder immediately above the sphincter and so project it backward and downward. Three sutures, one anterior and two lateral, are now passed through the lips of the os and the uterus is dragged downward so as to give a clear view of the anterior wall of the vagina.

A median vertical incision is now made from the uppermost point of the knob of the bougie downwards over the knob and along the middle of the stem for a distance of $1\frac{1}{2}$ –2 inches. With blunt pointed scissors cutting on the flat the mucous membrane and muscular coat of the vagina are carefully separated on both sides of the median incision down to the submucous tissue of the bladder and urethra without exposing the mucous membrane of the bladder itself. The vaginal mucous membrane is removed over a lozenge-shaped area, the center of which corresponds with the position of the most prominent part of the knob of the bougie; the upper angle is just over the point of the instrument. The lower angle corresponds with the stem while the two other angles point outward one on either side. Incisions are now made to join the apices and a lozenge-shaped portion of the vaginal mucous membrane is removed exposing a corresponding area of raw surface, the floor of which covers the neck of the bladder and the first half-inch of the urethra.

The next step in the operation consists in building up a dam to prevent the too easy escape of the urine. The successful construction of this mechanical obstruction depends on heaping up a bank of mucous membrane on the vesical side of the septum and supporting it by tightening the structures on the vaginal side.

The sutures used are chromic catgut and they are introduced as follows: On the left lip of the wound the needle is passed from left to right; it enters immediately under the vaginal mucous membrane to come out one-eighth of an inch to the left side of the center line of the bougie. It is then carried over the raw surface to one-eighth beyond the right side of the bougie in which it penetrates the tissue, to be brought out on the right lip of the wound. In this way six sutures are passed. The bougie is now with-

drawn, the sutures are tied, cut and buried. A second row of fine gut sutures is applied to unite the margins of the wound in the vaginal mucous membrane, and the operation is completed. No special after-treatment is necessary, except to retain a small catheter for the first week and cleanse the parts twice daily.

Dietetic Disorders in Infants.—Pritchard, in *The London Lancet*, discusses some of the common errors in diagnosis and treatment of these conditions, laying particular stress on the importance of considering disturbances of the motor functions of the alimentary canal. Many cases of so called indigestion are intractable to treatment because they are not recognized as being due to a perverted or in-coordinated action of the motor functions, a result dependent more on habit than on the particular qualities of the food which, for the time being, the infant may be consuming. Errors in the diet of the earliest days of life may lead to symptoms which are called indigestion, but these symptoms may be perpetuated as bad habits long after the cause of them has been removed. The conditions which Pritchard describes, he believes, though originally produced by faulty methods of feeding, were wrongly ascribed to defects in the food and were wrongly treated by changes and alteration in the diet. There is only one cure for faulty habits of this kind, and that is re-education. Among conditions discussed are: Cardiospasm, with and without esophageal dilatations and diverticula; "rumination"; pyloric spasm; and spasm of various portions of the intestine. Diarrhea may often be due to an abnormal hypersensitiveness of the neuromuscular mechanism of the intestine. In cases in which diarrheal movements contain undigested curds, it can often be demonstrated that these curds are merely balls of mucus, and when the treatment is based on the idea that these are undigested milk, it is usually fruitless. Reflexes arising from violent sucking at a dry breast or on a nipple with too small an aperture may also lead to diarrhea. Constipation may be the result of a dulling of the rectal reflex through overstimulation by cathartics, from excess of fat, or from underfeeding. Colicky pains are usually due to spasm of the intestinal muscles or of some sphincter. The use of the X-ray and bismuth meal is the most valuable means of diagnosing these motor disturbances, but a carefully taken history will usually give a clue to the primary cause which led up to the formation

of a bad habit of action of the neuromuscular mechanism.

Antenatal Hygiene, Its Influence Upon Infantile Mortality.—Routh (*Brit. Med. Jour.*) says that we are faced with four well defined conditions which are reducing the number of infants needed to replenish the population: postponement of marriage; the artificial prevention of fertilization of the ovum by one or both of the potential parents; antenatal mortality; and infantile mortality during the first year of life. As fertility diminishes with advancing age, change in the date of marriage must have an appreciable effect in diminishing the birth rate, and represents, the Registrar General states, 1.56 per cent. of the total reduction in the birth rate. The extent to which the artificial prevention of maternity is carried in any nationality can only be roughly estimated by the difference between the past and the present birth rate. The Registrar General says that if the fertility of married women in proportion to their numbers had been as high in 1911 as in 1876-1880, the legitimate births would have numbered 1,273,698, instead of the 843,505 actually recorded. This means a potential loss to the nation of 430,193 lives in the one year (1911). Adopting the moderate estimate of four abortions to each stillbirth, we get a total of 98,680 abortions, premature labors and stillbirths in 1910, and 96,925 in 1911, not very different from the number of deaths of children under one year of age from all causes in the same years, namely, 94,579 in 1910, and 114,600 in 1911. The total live births in 1910 were 896,962, and in 1911 881,138, so that the antenatal deaths were in proportion of one to every nine births, about 11 per cent. in both years, and this is probably far less than the real percentage. The dangers to which the fetus is directly or indirectly liable may be relieved by philanthropic, legislative and medical means. The first includes assistance by supplying nourishing food and sanitary dwelling rooms and restriction of industrial employment late in pregnancy. He advocates also a small weekly pension, to be paid after the sixth or seventh month, when the woman has voluntarily reported herself pregnant, in addition to the present maternity benefit of 30 shillings now paid after birth. If poor pregnant women could be sent to country homes or sanatoriums during part of their nine months' expectancy, very great good could be done. He urges earlier notification and registration of pregnant women

and compulsory registration of stillbirths. been already stated.

Treatment of Lymphosarcoma by Benzol.—Moorhead (Medical Press, London) reports the results obtained in cases of leucemia by the internal use of benzol suggests that the same remedy might be of value in cases of lymphosarcoma. If it should prove to have any effect in these cases, a ray of hope would be held out to patients suffering from intrathoracic or intraabdominal growths, for which at present no treatment of any value is available.

With the object of suggesting the use of the drug on a large scale in these cases, I put on record in the briefest manner the notes of a case that I have been treating for the last six weeks. The case is still under treatment, and in consequence the record is necessarily incomplete, but the results so far obtained are sufficiently promising to justify further use of this drug. Possibly it has already had a trial, as pressure of work prevents me from looking up the literature.

Case.—P. G., a farmer, age 65, was admitted into my wards on May 11, 1914. He stated that last October he first noticed a swelling on the right side of his neck. In December he began to have difficulty in breathing, and frequently was compelled to sit up all night owing to the trouble in drawing his breath. He was also much troubled with cough of an irritable nature and by a feeling of pressure in his chest, but otherwise felt quite well. The symptoms gradually got worse, and finally led to his seeking relief at the hospital.

On admission, a group of enlarged glands was found on the right side of the neck, and a similar but much smaller group on the left side. There was distinct dullness on percussion over the manubrium sterni, and the cardiac dullness was increased. Stridor was present and some huskiness of the voice, and a laryngeal examination showed some weakness of the right vocal cord. The spleen was palpable, but not tender. An X-ray examination showed the presence of a large opaque mass filling up the greater part of the superior mediastinum and apparently extending down on each side of the pericardium. The size of the heart itself was normal. The blood showed moderate anemia; the white cells numbered 11,200 per c.mm., and there was a slight excess of lymphocytes; Wassermann test negative. No other abnormality was found as a result of careful examination, the cardiac, respiratory and other systems being normal, with the exception of what has

A diagnosis of lymphosarcoma was made, and it was determined to try benzol. A drachm of the drug was given at first, but the dose was rapidly increased until 5 drachms daily were given. X-ray exposures have also been given twice weekly, the rays being concentrated over the manubrium sterni.

The result up to the present is as follows: The glands in the neck have almost completely disappeared, the dullness has gone, and the cough and huskiness are much less. The patient sleeps now without trouble, and in every way feels much better. An X-ray examination still shows opacity over much the same area as before, but the outlines are apparently less defined. The spleen is no longer palpable. There has been a slight diminution in the white cell count; and, so far, no unpleasant symptom has developed from the benzol.

As already stated, this report is quite incomplete. At any time a return of symptoms may take place, and in any event months must elapse before one can determine whether any real good has been effected. However, as it is the first case of intrathoracic lymphosarcoma that I have seen benefit by any treatment, and as there are the definite and unmistakable signs of the enlarged glands in the neck disappearing, I think I am justified in reporting the case now with a view to stimulating the use of the drug, and the careful observation of the results obtained, and hope to publish a much more complete report later on.

Acute Nephritis in Infants with Disturbances of Digestion.—Frank (Arch. f. Kinderheil) says that although nephritis is less frequent in infants than in older children, still a considerable number of cases are published. The reason why there is this smaller number of cases in infants is that they are less exposed to contagion from infectious diseases which cause nephritis than the child who goes to school and mixes daily with other children. Again many cases of nephritis are due to infections by the pus-producing germs, streptococcus, staphylococcus, etc. To these also the infant is less exposed. Syphilis causes some cases of nephritis. Another set of cases is caused by poisoning with various metals and chemicals, and to these also the infant is not exposed. Winograft found nephritis present in twelve of twenty-five kidneys of the fetus examined by him. Such a condition might result, either of an in-

fectious nature or due to autointoxication. This is plausible on account of the fact that the kidneys began to functionate at an early period of intrauterine life. Nephritis in the fetus may be shown by undifferentiated embryonic cells left in the fetal kidney and generally considered to be inflammatory round cells. Also masses of coagulated albumin may be found in the glomerular capsules and canals. Of less importance, according to the author, are the cases resulting from disturbances of digestive functions. These cases are given undue importance by some authors, and thus some even considered this to be always the cause of nephritis in infants. There are two theories of the causation of nephritis, the toxic and the infectious. If intoxication is the cause albuminuria and casts will be present but there need not have a true nephritis. In many children who die with toxic symptoms no nephritis is found postmortem. Etiological factors in infection cases may be bacillus coli communis infection from the intestine, or infection from the otitis media; or ascending infection from the bladder. Out of 452 cases examined postmortem in the service of Dr. Lubarsch at Kiel, nephritis was found in seventeen and pyelonephritis in five, that is a percentage of 4.7. Among the twenty-two cases of which histories are given by the author are instances of an exudative form with hemorrhage, with purulent exudate, with lymphocytic infiltration, an alternative of the hemorrhagic form is found in the permeability of the infantile blood-vessels. In Lubarsch's examination he frequently found lesion in the spinal cord, especially near its surface, in greater or less number showing exudation diapedesis. This helps to explain the frequency of the hemorrhagic form. In eighty-eight cases were found lesions of the alternative form of nephritis in a stage of regression, such as changes in the parenchyma, transudation, fatty epithelium, and even calcareous changes. In cases in which both kidneys are affected and there are bladder and pelvic changes also, a hematogenous origin is probable. In a second set of cases a urogenous origin is possible. An ascending infection will cause widespread kidney lesions. In some cases the infective organisms are added to a failing nutrition from digestive disturbances, which are an important factor in the causation of nephritis. Only one-third of the author's cases had nutrition, which goes to show that this is far from the invariable cause of nephritis.

The author's conclusions are these: acute nephritis in infants is frequent; it is generally of exudative nature; all sorts of infections and disturbances of nutrition play an etiological role.

Rapir Relief in Acute Lumbago by Manipulation and Active Movement.—Hago (British Medical Journal) proceeds as follows: with the patient in a sitting posture in bed or on a chair, the physician first kneads the lumbar muscles deeply for a short time; then fixing the lower part of the spinal column by a strong pressure of the thumbs on each side of the vertebrae he makes the patient first bend forward as far as possible, then back as far as possible half a dozen times, then bend from one side to the other in a similar way, and finally rotate head and shoulders from one side to the other. Prompt and permanent relief is claimed by this procedure.

Malpractice.—Action was brought for malpractice in the treatment of a severe Pott's fracture of the left foot. Owing to the swelling of the joint and an abrasion of the skin, the defendant did not invert the foot for fear of gangrene. The swelled condition, under the treatment given, continued from the date of the accident, January 23, till February 13 before beginning to abate, and the joint healed without an inversion of the foot. The trial court ordered a nonsuit on the ground that the plaintiff failed to show that the treatment given him was not proper as applied to the kind and degree of fracture he was suffering from and the conditions that developed. The evidence showed that the fracture was a very severe one, in which the fibula was splintered and the ligaments of the ankle joint ruptured; that the foot was very much swelled and discolored, and the skin partly abraded in places at the time of the first treatment. The plaintiff's counsel claimed that since the evidence showed that the conditions testified to by the defendant do not usually obtain in ordinary Pott's fractures for so long a time, the jury had a right to find that they did not in the instant case. Hence, since it was shown that in cases of ordinary Pott's fractures the danger of gangrene was usually passed in from seven to ten days, and since bony union does not take place until the third week, the jury might find malpractice from failure to invert the foot after danger of gangrene had passed and before bony union took place. All agreed that there

should be no inversion of the foot until danger of gangrene had passed. It was held that the plaintiff's fracture not being an ordinary Potts' fracture, but a severe and complicated one, there was nothing inherently or obviously incredible about the defendant's testimony as to the conditions found the first day he examined the foot. The trial court, therefore, properly held that such conditions must be accepted as verities, since there was no evidence to the contrary. Another claim made was that the evidence of the defendant showed that he was ignorant of the practice of inverting the foot in cases of Potts' fracture, and therefore did not do it in this case. It was held that, conceding that this was true, still, if the treatment he gave was the proper one under the conditions existing, his ignorance became immaterial. The plaintiff failed to show that a condition warranting inversion existed at any time, owing to the fact that the evidence showed that danger from gangrene continued till bony union took place, and that thereafter it was not good practice to invert. Judgment for the defendant was affirmed. Wisconsin Supreme Court.

Permanganates in Sloughing and Tetanus Infected Wounds.—Rogers (British Medical Journal) many years experience with the use of washes and local wet dressings of potassium permanganate solutions in the treatment of sloughing wounds, comprising tropical ulcers, an obstinate form of tropical paronychia, bedsores, cancrum oris, and liver abscess with secondary infection, has convinced him that this agent has especial value in such conditions. In addition, experimental work on animals has shown that the simultaneous injection of permanganate and tetanus inoculation, prevents infection in the majority of cases. The rationale of the use of permanganate under all of these circumstances seems not to depend upon its rather feeble bactericidal properties, but to rest upon its power of destroying the associated bacterial toxins through oxidation. It is conceived that these toxins have a power antagonistic to phagocytosis, and their removal by permanganate permits normal phagocytic processes successfully to cope with the invading bacteria. It has been proved that tetanus infection does not follow the injection of the organisms if they have previously been washed free from toxin, and it seems that the oxidizing action of potassium permanganate serves the same purpose. In treatment

the permanganate should be used in solutions not weaker than one in 500, and solutions of one or two per cent. strength are more effective, being at the same time not irritating. The permanganate has the peculiar value of providing its own means for control in that it is decolorized so long as oxidizable substances are still present in the wound. It should therefore be applied repeatedly until its color is no longer altered. It seems probable that the common gas forming organisms will also yield promptly to these applications.

Miscellaneous.

Frontal Sinusitis in a Girl Aged Seven.

McKenzie reports this case. About three months before the child was brought to the hospital she was overturned by bicycle and thrown on her face. A fortnight later pain and swelling in the left supraorbital region and around the left eye set in, together with headache and pyrexia. After about ten days of fever and headache, the patient being confined to bed, a sudden gush of pus from the left nostril took place. Thereupon the pain ceased, the fever left her, and the child was able to be up and about, but the discharge from the nose continued. When she came to the hospital pus was seen to be oozing freely from under the left middle turbinal. A skiagram showed well marked frontal sinuses on both sides, and the left frontal sinus, together with the left antrum, threw shadows. Treatment was confined to nasal drainage; the left middle turbinal was removed and nasal antrostomy performed, and the discharge gradually ceased.—Proceedings of the royal Society of Medicine.

Before and After Childbirth.

Childbirth is always attended by more or less danger and discomfort. Too often the extra burden a prospective mother has to bear overtaxes her nutrition and strength.

The mother who nurses her baby also frequently has to have supportive treatment to enable her to meet the demand placed on her bodily metabolism by the needs of her growing offspring. At such times of stress effective tonic treatment is always required and clinical experience has clearly shown that no remedy is so serviceable from every standpoint as Gray's Glycerine Tonic Comp.

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Intestinal Toxemia.

The investigations of Metchnikoff and Schmidt, together with the later studies of Lane, Jordan and many others have lain such emphasis on the evils resulting from intestinal stasis that it is at last recognized that no small proportion are directly attributable to faulty elimination of the intestinal accumulations in the lower bowel. For a long time, to be sure, the evils of chronic constipation have been realized, but it is doubtful if, until Lane began to speak of the large intestine as the "cesspool of the human body," the dangers of intestinal putrefaction were fully appreciated.

It is hardly probable that Lane's radical treatment of "short circuiting" the bowel—the removal of three to eight feet of intestine—will ever be popular and simpler measures will unquestionably hold a definite place in the management of intestinal stasis for some time to come.

Many and various are the remedies that have been employed with more or less success, but among recent remedies brought forward for accomplishing intestinal elimination, and, what is often of even greater importance, the removal of certain local intestinal conditions contributory to, or the result of the bowel stasis, Prunoids unquestionably stands first. This unique combination of phenolphthalein and other carefully selected drugs has been found an evacuant of exceptional value. Its effect is prompt and

certain, with none of the iniquities of the commonly used laxatives and cathartics. Prunoids do not gripe nor occasion the slightest discomfort, although they produce very copious movements. Most important of all, however, is the physiologic effect on the intestinal glands and muscular tissue that follows their systematic use. Unlike most cathartics, the reactionary effect never tends to increase the constipation. One effective dose is often followed by regular movements for several successive days, and used routinely, in the absence of organic causes, gradual diminution and at last complete cessation of the remedy is always possible; in other words, a more or less permanent correction of the constipation is an almost invariable result.

Such a preparation, with its broad field of satisfactory application, cannot fail to appeal to the zealous physician. Any medical man who is not familiar with the exceptional clinical value of Prunoids, is urged to write for samples to the Sultan Drug Company, Saint Louis, Mo.

Control of Prostitution.

Dr. G. Shearman Peterkin of Seattle concludes a recent paper on Police Control of Prostitution as follows:

In other words, teach the prostitute:

(1) Why, according to the laws of nature, venereal diseases are dangerous to her, to her health, and to society.

(2) The clinical symptoms of venereal diseases, and the means of controlling them.

(3) The means of preventing venereal diseases, and of controlling infection when it is present in herself or she sees it present in her patrons.

(4) The worthlessness of a macroscopic examination and the value of a microscopic examination to herself—why no physician can state truthfully that disease is gonorrheal by simply looking at the sexual organs or discharge, but must examine the discharge with a microscope.

(5) The use of the speculum and tempon to the inmates of assignation houses, that tampons may be used and frequently changed, and thus infection prevented, especially when intercourse is indulged in during existence of a chronic infection or when menstrual period is present.

(6) That men should use glass urinals in the bedrooms instead of the usual vessels—thus the presence of shreds, etc., in the urine will indicate to

the women the possible presence of gonorrhea, the necessity of taking extra precautions, etc.

Such hygienic instruction will illustrate the character of the means that are within the power of the law to prescribe and the police to enforce, because they aim to mitigate and prevent an evil without transgressing the rights of the individual as recognized by law. They see disease as it is, not as we would like to have it. But especially they do not attempt to abrogate the principles of an eternal law, the law of sex, whose mandates man must accept.

Abscesses of the Larynx in Childhood.

Descottes reports thirty cases of this condition which he regards as relatively rare. Laryngeal suppuration may occur following measles, grip, diphtheria, variola, scarlatina, and typhoid fever, but chiefly following diphtheria, measles, and grip. In rethopharyngeal abscess the pus may be secondary to a laryngitis, either diphtheric or non-diphtheric. In diphtheria perilaryngeal suppuration occurs, most frequently following intubation as as the result of ulceration of the larynx. The symptoms of abscess of the larynx are obscure. There may be a tumefaction of the tissues of the neck or an edema of the glottis. As soon as the diagnosis is made or suspected, prompt incision from the outside is imperative.—Rassequa di *Pediatria* del Prof. Cattaneo.

The Unsettled Problem of Pyloric Occlusion.

Experiences with gastro-enterostomy for pyloric stenosis due to ulcer constitute very apt illustrations of the remarkable tendency in the human body towards reformation of a physiological lumen. It has been found that, when food has been deflected through the new gastroenteric stomach for some time, the pylorus becomes patent again in not a few cases. The unused stoma then closes, in part or entirely, irritation of the ulcer at the pylorus results in a second stenosis, and the patient's symptoms recur. This rather schematic outline of the mechanics of some of the reported cases suffices to indicate the reason for, and the importance of, the many efforts made to permanently occlude the pylorus. Of course the ideal method is to hesect the pylorus with the ulcer-bearing area. Even when feasible, however, this procedure is not always desirable because it adds considerably to the risk of the operation. The same may be stated for the operation consisting in

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division of the pylorus and suture and inversion of the cut lumina.

The first efforts towards simple occlusion of the pylorus consisted in the ligation with stout silk thread. It was soon found that the silk worked its way into the interior of the stomach and that the pylorus became patent in many instances. Although more successful, the method consisting in crushing and ligating the pylorus was also found unsatisfactory. This is not the place to review all the methods that have been employed to occlude the pylorus permanently. It is sufficient to state that none of them has had the full measure of success. Some recent encouraging efforts should be mentioned. Basing his work on uniformly satisfactory experimental results, Wilms performed pyloric occlusion, in several cases, with strips of fascia lata and reported completely successful pyloric closure. The operation have been performed at too recent a time to decide finally upon the method; unfortunately, however, an unsatisfactory result has already been reported by another observer. In a recent contribution, Strauss describes ideal results, in a series of experiments observed during a considerable period of time, by shelling out the pyloric mucosa (through an incision of the muscularis) and ligating it with a

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strip of fascia. It is very doubtful, however, if this operation will have any great practical possibilities, for it presupposes normal pyloric tissues and a quite bloodless layer of cleavage between mucosa and muscularis.

It is evident, however, that the very important problem of securing and adequate and permanent occlusion of the pylorus is still far from solved. Perhaps its solution will be found by some simple modification of already proposed operations.

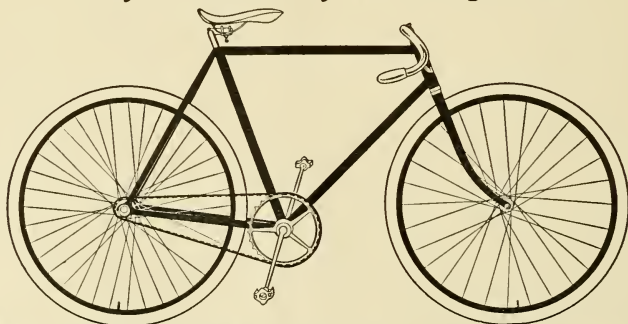
Special Internal Secretion Number.

The editors of the Woman's Medical Journal wish to call especial attention to the March issue which will be an "Internal Secretion" number, and will contain much of interest on this most interesting subject.

The contributors are particularly well known and able members of the medical profession. Dr. Eugene Hertoghe of Antwerp, Belgium, is perhaps the foremost authority in Europe on his specialty, "Hypo-thyroidism," and he contributes a most helpful and scientific article based

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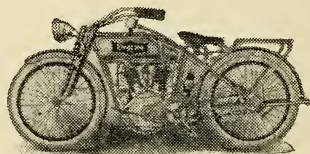


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on researches he has made in his study of the thyroid gland, Dr. Henry R. Harrower of New York, is an authority on "Hormone Therapy," having recently written a very important book having for its title "Practical Hormone Therapy." Dr. Harrower will consider mammary therapeutics in an article entitled "The Mamma as an Internal Secretory Organ."

Readers of The Journal need no introduction to the other contributors of this special number. Dr. Mary Sutton Macy, and Dr. William Seaman Bainbridge, both of New York, have frequently given us helpful and sound advice in their former contributions. In this number Dr. Macy

will write on "Rest as a Therapeutic Measure in Systematic Goitre," while Dr. Bainbridge will give some of the results of his large experience in the study of the "Internal Secretion of the Ovary."

Our readers are assured of a splendid symposium, which will prove both helpful and inspiring.

Dr. John R. Ashe announces that he has opened an office at 1201-3 Independence Building, Charlotte, N. C. He will confine his practice to diseases of children exclusively.

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As every physician of experience knows, the mortality in pneumonia is very high, as compared to that of the average infectious disease. The dream of scientific men that a specific for pneumonia would some day materialize has not yet become a fact, and it is probable that it will not for a long time to come. In the opinion of many advanced members of the profession Pneumonia Phylacogen, while not a specific, is the nearest approach to such an agent. Certainly some remarkable results have followed the use of this product in many serious cases that have been reported in recent months—cases in some instances that had failed to respond to conventional methods of treatment. Physicians owe it to their pneumonia patients to inform themselves with respect to the merits and accomplishments of Pneumonia Phylacogen. Ample literature on the subject is available. It will be cheerfully sent to any practitioner who will address a request for it to Parke, Davis & Co., the manufacturers of Phylacogens, with home offices and laboratories at Detroit, Michigan.

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Recent Biological Investigations on the Diagnosis of Malignant Growths.

Some important researches by Dr. G. Mioni in cases of carcinoma and sarcoma have recently been published in the May-June number of *Tumori*. The haemolytic reaction, carried out by Crile's methods was positive in 62 per cent. of individuals suffering from neoplasms; negative in 32 per cent. While, however, the former consisted for the most part of operable visceral tumours, many in an early stage, the latter were either cutaneous cancers or those in an advanced condition where the diagnosis was clinically evident. These results were, therefore, all the more appreciable in that they furnished an element of diagnosis in cases clinically doubtful. Considering the fact that the reaction was often positive in suppurative conditions, in acute febrile diseases, and cases of surgical tuberculosis which were also investigated in the same manner, it must be admitted that this detracts in some degree from the practical value which might be attributed to the reaction. Elsberg's reaction gave 11.2 per cent. of positive results, as many in the cases investigated as in controls. This cannot be looked upon as satisfactory from a practical point of view. Estimation of the antitryptic index gave high values in 91.4 per cent. of the cases. This fact is important since the presence of a high index in a patient in whom the question of an acute infective or suppurative focus could be eliminated would lend support to the diagnosis of malignant disease, especially where the symptoms pointed to such a possibility. This reaction is simple, and extremely easy and practicable. Methods of biological investigation based on immunity reactions furnished uncertain results. The specificity of the antigen is far from being demonstrated, as our knowledge of the etiology of malignant growths is uncertain. It cannot be denied that in the serum of patients suffering from neoplasms there are substances capable of provoking specific reactions (deviation of complement) when in contact with extracts of tumors, substances that are not to be found in the serum of healthy persons or those suffering from other diseases; but at the same time it must be recognized that nearly similar reactions take place also with non-specific antigens, and this largely detracts from their significance. The method of passive anaphylaxis gave the author absolutely negative results when the second injection was endoperitoneal; positive in 33.3 per cent. of the cases when

the second injection was subdural; but also the controls showed phenomena of irritation and lowering of temperature in an almost equal percentage. It seems doubtful, therefore, whether the anaphylactic picture can be attributed to a true reaction between antigen and antibody, but it is more probably due to a mechanical or toxic action caused by the solution of antigen coming in contact with the nervous centres. The deviation of the complement was complete in 23.2 per cent. of individuals who had growths, incomplete in 14.7 per cent., negative in 11.1 per cent., and doubtful in 17.6 per cent. In the controls it was negative in 62.5 per cent., incomplete in 28.3 per cent., and doubtful in 16.6 per cent. The reaction was inconstant according to the antigen employed; it might confirm other reactions, but taken alone the results were unsatisfactory. The meiostagmic reaction was considered positive when the difference was 1 to 5; thus, with non-specific antigen it was positive in 57.1 per cent. of the cases. Considering, however, the difficulty of producing active antigens and the ease with which these lose

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their efficacy, it will be difficult for such investigations to take a prominent position in clinical practice. After the total extirpation of the neoplasms a progressive diminution ending in complete disappearance of isohaemolysins contained in the serum of the patients was observed and at the same time a diminution of the antitryptic index until it reached normal values. This fact demonstrates that the isohaemolysins as well as the antitryptic ferments are in direct relation to the presence of the neoplastic mass and are the indication of the altered metabolism of the organism when a prey to malignant disease.—The London Lancet.

Report of the Surgeon General of the United States Army.

The annual report of the Surgeon General of the U. S. Army for the calendar year 1913 is a satisfactory document. The admission rate was the lowest on record, showing a reduction over the previous year of more than 18 per cent. As is pointed out in the report the constantly non-effective rate is the true index of the loss of efficiency of the army from disease and injury. The rate indicates the average number of men in each 1,000 incapacitated for duty each day during the year. For the American army in 1913 the rate was 23.97, the lowest rate recorded. Comparing the non-effective rate for disease only for troops in the United States, 13.61, with the best previous rate of the army, which was 25.23 in 1896, it is observed that there was a reduction of over 2.6 per cent. The death rate was slightly higher than for the previous year, the increase being due to the accident to the coast artillery companies, wrecked while traveling at Burrow's Creek, Miss., October 19, 1913, with 17 deaths.

Perhaps the most encouraging part of the report is that which refers to typhoid fever. Only three cases of this disease occurred during the year under review in the army stationed in the United States. In the army in 1912 there were 18 cases with 3 deaths; in 1911, 44 cases with 6 deaths; in 1910, 142 cases with 10 deaths; and in 1909, when the typhoid prophylaxis was first begun voluntarily, 173 cases with 16 deaths. With regard to antityphoid inoculation the report points out the remarkable decrease in admission and death rates of the enlisted men of the army in the United States as a result of the use of the typhoid prophylactic. The report goes on to say that it is to be especially emphasized that there has been no lessening of the efforts of the

army to prevent, by improved sanitary measures, the occurrence of typhoid infection. Advances in the other sanitary measures have gone on, hand in hand, with the extension of the typhoid prophylaxis. It is believed that the typhoid prophylaxis is as potent a preventive against typhoid as vaccination is against smallpox. But though vaccination is a reliable measure for the prevention of smallpox, few would advocate the abolition of other needful sanitary measures. With respect to the duration of the immunity conferred by antityphoid inoculation, it is stated that while such duration is unknown, it is improbable that it is as long as that conferred by vaccine against smallpox, and therefore reimmunization at the beginning of each enlistment is believed to be appropriate, as it is also very convenient from an administration point.

The admission rate for tuberculosis was low. Venereal diseases have largely decreased among the soldiers, a result partly due to the campaign of education relative to venereal disease which has been carried on in the army for several years and which has been greatly assisted by the Act of Congress stopping the pay of those incapacitated by the disease. The rate for alcoholism was the lowest ever recorded. The rates for malarial fever were the lowest since the year 1898, at which time United States troops were first permanently stationed in the tropics.

Regarding the urgent needs of the department, the surgeon general draws attention to the fact that the reorganization of the hospital corps is essential, if its efficiency is to be preserved. He further calls notice to the shortage of mobile sanitary units and says that in view of the great battle losses to be expected in modern wars, it is a serious responsibility to rely upon improvised units that must serve at the front. Lastly it is pointed out that the medical corps is the only portion of the army not included in the plan of education of the army instituted when Senator Root was Secretary of War.—Editorial in The New York Medical Record.

Removal of a Large Pharyngeal Pouch Under Local Anesthesia.

W. H. Kelson reports the case of a man aged 70 who was admitted into the London Throat Hospital in November, 1913, with the diagnosis of stricture of the esophagus. He was stated to have had increasing difficulty in swallowing for four years, and to be getting steadily thinner and weaker. After careful examination

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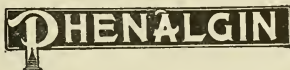
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the author's suspicions were aroused as to the correctness of the above-mentioned diagnosis, and at his request an X-ray examination was made, and clearly demonstrated the presence of a pouch dipping down to the aortic arch and lying behind and a little to the left of the esophagus. As the patient appeared to be going down hill somewhat rapidly it was decided to operate, and to avoid all risk of postanesthetic vomiting the author decided to use local anesthesia. Operation was performed December 3, after the injection of a solution of cocaine and morphine along the line of the proposed incision. Hemorrhage was trifling. It was found necessary to divide the omohyoid muscle.—Proceedings of the Royal Society of Medicine.

The Proposed Legalization of Abortion.

In a recent issue of the New York Medical Journal a gynecologist pleads for the legalization of the early interruption of pregnancy. Induced abortion would then cease to be criminal and "the poor woman who, through force of circumstances, finds herself incapable of caring for additional children, will find the hospital doors ready for her as well as for any other deserving patient, where, under aseptic precaution and necessary skill, she will get proper attention. The rich woman will not fear to approach the ethical surgeon who, swayed by the same motives that govern all his actions, will use proper discrimination, moral suasion whenever possible, and, as a last resort, at least render his patient proper aid, scientific services, safe from chronic invalidism or death."

It seems to us a step backward to argue in the foregoing style. Primitive peoples practised infanticide, while abortion is essentially a device of semi-civilized societies; the prevention of conception in proper circumstances is a development which we associate with highly intelligent communities. If a woman in very poor circumstances becomes pregnant every year, is it conceivable that she should be subjected to an operation for emptying the uterus that often? The results of such a system, even in the best of hands, would be gynecologically deplorable. Both the woman and the gynecologist in such a case would be feeble-minded to follow such a course in the light of our present knowledge concerning contraception. To advocate anything remotely suggestive of such methods argues small wisdom. Abortion performed for pathological indications developing in the course

of early pregnancy is one thing, but abortion because of "social and economic inequalities that are becoming more and more acute under the present socio-economic system" is another thing. As we understand the writer, his plea is based upon social rather than pathological grounds. Pathological indications are only occasional, and when real can be dealt with even now under the law, but socio-economic conditions are more or less continuous and ramifying, and the problem under consideration would have no end so long as they were made the criteria for abortion. It would mean, as we have said, an annual performance not justifiable from a medical standpoint. The operation of abortion is not such a small matter as to be treated so lightly. The medical man who talks in such an easy fashion about it reminds one of the physician who regards an attack of gonorrhea as a small matter—no worse than a cold in the head.—Editorial in the Medical Times.

Plasmodial Anemia.

In spite of the modern theory of the etiology of malaria and malarial affections (mosquito-borne infection) this plasmodial disease continues to be rife in certain sections of the country and bids fair to be, like "the poor," "always with us."

Every physician of experience appreciates the principles which should guide him in the treatment of the various acute manifestations of paludal poisoning, i. e., the destruction of the plasmodial hosts which have invaded the blood and which, if not eliminated, consume and destroy the red cells, the vital element of the circulating fluid.

When this purpose once been accomplished the patient is but partly cured; the damage done to the red corpuscles must be repaired and the vitality of the blood restored, if re-infection is to be avoided. If there is any one condition in which direct hematonic or blood-building therapy is positively indicated, it is in Post-Malarial Anemia. As soon as the febrile period has passed, iron, in some form, should be given in full dosage. Pepto-Mangan (Gude) constitutes the ideal method of administering this essential blood-building agent in this as well as in any anemia condition. Both the iron and manganese in Pepto-Mangan are in organic combination with peptones and are therefore easily and promptly absorbed and assimilated without causing

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Underworked Opportunities in Therapeutics.

Our attention has been called to an interesting pamphlet with the above title which has just been put out by Dr. Henry R. Harrower.

It considers the merits of organotherapy as a means of treatment that has great possibilities, many of which are overlooked in general practice. We believe that many of our readers will be glad to read this brochure, and will profit by reading it.

A copy may be had by addressing the author at 880 W. 180th Street, New York.

Public Health Service.

One cannot help but be struck upon reading the list of questions which have been published by Surgeon General Blue of the Public Health and Marine Hospital Service by the frequent recurrence of the subject of demography. At a recent investigation of certain city departments the successful contestant for the position of demographer was asked to define the nature and requirements of the position he held, and his answers were so very vague as to lead one to suspect that demography is as yet a sort of scrap basket into which most questions of life, death, birth and marriage are thrown. Certainly one may doubt how many physicians, without special training for the work, could answer off-hand such questions as to how to determine the rate of increase of population during certain periods and how to estimate the probable population at some future date. It has been warmly urged in some quarters that the Public Health Service should be made the nucleus of a National Department of Health removed, so far as may be, from the sphere of politics and empowered to coapt the present State Departments of Health into



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a homogeneous body. The idea seems an excellent one even at first glance as the Department at present constituted is readily capable of rapid expansion. The Journal has previously pointed out the incongruous condition of affairs that exists by reason of the widely different requirements of the health departments of neighboring states, and even municipalities, whereby the careful requirements and intelligent control of disease in one locality may be rendered nugatory by the laxness of a bordering state. The general proposition seems to be favorably considered and only its details are questions for discussion. If the American Medical Association will take the matter up at Washington and the general medical public will back up the Association, we may count upon the early adoption of a much needed reform in our public health laws.—Editorial in Long Island Medical Journal.

Is Emetine Insufficient in Dysentery?

Dr. Llewellyn Phillips, of Cairo, has a communication in the British Medical Journal for December 19, 1914, which possesses particular interest when studied in connection with our comments last week (page 30) on the use of emetine in dysentery. Doctor Phillips has found that relapse are frequent after the exclusive use of emetine, because although the drug is very effective against *Entamoeba histolytica*, it is without action on the nonparasitic *Entamoeba coli*. Thus a patient may recover rapidly from a hepatitis, but the cystic or tetragera form of the organism may then appear in the feces and persist indefinitely, giving rise to relapses that have extended over a period of two and a half years. Colomel and thymol have been used with success in the cystic stage of amebiasis, and so has male fern, but Phillips considers the latter too poisonous a drug to be used for any length of time. For a radical cure, therefore, the writer proceeds as follows: He carries on the administration of emetine hypodermically for at least ten days or longer if the state of the patient demands it. This is followed by the oral administration of the drug. Subsequent courses are given at increasing intervals, as is the practice with syphilis or malaria, and in the intervals, courses of calomel combined with thymol; if this is not sufficient, some other intestinal parasiticide should be tried. No man should be considered cured until after several examinations no cysts of *Entamoeba histolytica* are

to be found in the feces. Further, all carriers, even though they may never have had dysenteric or other symptoms, are to be considered as presenting cases of amebiasis, and are to be treated accordingly.

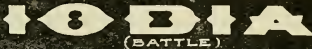
Salvarsan and neosalvarsan have been employed for the treatment of dysentery and excellent results have been obtained; arsenic has been detected in the stools after their use. But the experimenters have unfortunately not recorded if the cysts were destroyed. Phillips always administers at the same time salines to aid in the expulsion of the parasites.—Editorial in The New York Medical Journal.

Physicochemical Studies on the Blood.

From the viewpoint of diagnosis the greatest emphasis has been placed upon the morphology of the blood and comparatively scant attention has been paid to the physicochemical changes that occur in this medium under normal and pathological conditions. The studies of Hamburger on the osmotic and ionic properties of the blood formed the basis for a large number of investigations along this line, most of which have been concerned with seeking the application of the fundamental of physics to the vital fluid. The majority of the studies of the physical properties of the blood have been concerned with the so-called resistance of the red corpuscles to hypotonic salt solutions.

A comprehensive research into the nature and degree of the last-mentioned phenomenon has been made by Gottfried Holler (*Zeitschrift für klinische Medizin*, Vol. 81, Nos. 1 and 2.) The resistance of the red blood cells is regarded as a complex phenomenon dependent upon the actual resistance of the protoplasmic framework and the osmotic pressure of the intracellular fluid. The author devised a special technique for studying the degree of this resistance under various conditions. The main features of this technique consist in the preparation of two similar series of tubes containing solutions of sodium chloride and arranged in an order according to the descending concentration of the solution. Suspensions of red blood cells are added to both series of tubes; but the suspension added to one of the series is first repeatedly washed in physiological twenty-four hours and are then examined against a white background. The red corpuscles form a sediment at the bottom of the tubes. The tube in which the super-

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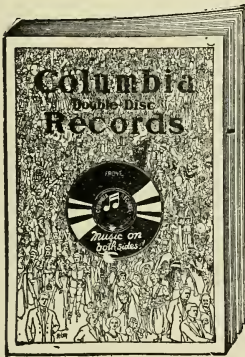
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natant liquid first shows the slightest red tinge is regarded as the one which indicates the minimum degree of resistance of the red blood cells to hemolysis.

With this technique it was found that under normal conditions the minimum resistance for unwashed red blood cells is indicated by the tubes having a saline concentration of 0.44 to 0.48 per cent. In case of the washed corpuscles the resistance is lower. Holler used this method in studying the resistance of the red blood cells in a wide range of diseases. Thus in febrile conditions generally there is a diminution in resistance, a fact attributed to the reduced alkalinity of the blood. On the other hand, in typhoid fever and pneumonia the globular resistance is increased as the result of the withdrawal of sodium chloride from the red blood cells to supply the demands of the exudate and the setting free of chlorine ions which have an important effect upon the osmotic pressure of the cellular content. In jaundice there is an increased resistance, while in severe anemia, as in chlorosis, the resistance is diminished. In the primary hemolytic anemias there is evidence of a biochemical peculiarity which favors the early lysis of the red blood cells.

The technique elaborated by Holler lends itself readily to routine laboratory work on the blood, and promises results of eminent diagnostic value, particularly in the realm of hematology.—Editorial in Medical Record New York.

The Meningeal Reactions in Scarlet Fever.

Mauriac and Philip state that Hutinel has recently called attention to the meningeal reaction frequently accompanying uremia. The complexity of this subject is further increased by the fact that during scarlet fever there may be various types of meningeal involvement. These types may be associated with aural, nasal, or uremic complications, or there may be simple meningeal reactions without the existence of any true meningitis. If during the eruptive or convalescent periods of scarlet fever uremia develops, the meningeal symptoms may readily be explained on the basis of the nitrogen retention. If, however, in such a case, convulsions suddenly arise in association with a high temperature and other signs of meningeal irritation, one perature and other signs of meningeal irritation, one is justified in thinking of an acute infection of the meninges superadded on the meningeal intoxication. In one of the author's cases a pneumococcic meningitis

was grafted on a simple uremic irritation of the meninges.—Journal de Medecine de Bordeaux.

The President's Physician, Dr. Cary T. Grayson.

Although President Wilson has a cabinet to advise him, he is not bound to follow its advice. There is one consultant, however, whose word is practically law to him, and who acts as his personal guardian. This is the official White House physician, and in Woodrow Wilson's case it is Dr. Cary T. Grayson, U. S. N.

Aside from being his medical adviser, Dr. Grayson—or Past Assistant Surgeon Grayson, to use the navy title—is one of the few close personal friends the President has in Washington. He accompanies the chief executive wherever he goes, advises him about what he shall eat and what he shall wear, suggests the proper hours of recreation and work, and tells him what he should and should not do in the way of labor.

Dr. Grayson formerly was ship's physician on the President's yacht Mayflower. It was President Taft who summoned him to the White House. President Wilson retained him and the two have become great cronies.

Dr. Grayson was born and reared at Culpepper, Va. He is thirty-two years old and entered the navy as an acting assistant surgeon ten years ago. He is a member of the house staff on the naval hospital here. As past assistant surgeon in the navy, Dr. Grayson's rank corresponds to that of captain in the army.

All physicians will be interested in the above note. It is complimentary to the president and the medical profession. Dr. Grayson must be a capable physician and a general and attractive character.—The Evening Post, New York.

The Health and Physique of the Chinaman.

It is interesting as well as instructive to learn all that is possible concerning the characteristics, mental and physical, of all races. At the present time when the yellow races are looming large in the public eye, it is especially instructive to gather as many facts as can be gathered regarding the Chinese. Consequently the eighth annual report of the collegiate and medical departments of the Yale mission in Changsha, China, contains many items of value to medical readers.

Referring to the physical characteristics of the Chinese students of the school in question, the report says: The general physical condition of 25 per cent. of

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112 such students examined was poor while that of 53 per cent. was only fair, leaving but 22 per cent. in actually good all around condition. In muscular development the percentages were: poor, 39 per cent.; fair, 41 per cent.; good, 20 per cent.; and in the strength tests the average was 306.5 below the average for students of corresponding heights at Yale in America. Nutrition and fatty tissue were subnormal in 27 per cent., and only fair in 46 per cent. Examinations for digestion showed 33 per cent. poor, 25 per cent. fair. In 74 per cent. examination of the feces showed the presence of Ascaris eggs. Total neglect or very ineffective care of the teeth was common, as shown by a percentage of 63 per cent. that needed cleaning.

Unhealthy conditions in the respiratory system were noticeably prevalent, no less than 60 per cent. being in need of treatment for either nose, throat, or lungs. High pitched resonance was evident in 30 per cent. of the lungs examined. Other common defects were: adenoids, 11 per cent.; diseased tonsils, 47 per cent.; deflected septum, 33 per cent.; swollen

polyps, or narrowed fauces, 18 per cent.; turbinates, 35 per cent. The vision of 40 per cent. was defective, several marked cases of trachoma were found and there was evidence of it in 16 per cent. In the circulatory system a thickening of the vessel wall was noticeable in 49 per cent., which is abnormal for an average age of 18 years, 6 months. Thirteen per cent. had some enlargement of the heart, while

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20 per cent. had either murmurs or other signs of irritability.

From the physical standpoint it is obvious that the Chinese youth. in the district in which the Yale Mission works, is not the equal of his white brother in America. However, this is not a matter for surprise, by heredity he is not so well born in a physical sense, by environment he is not on the same plane, and lastly his mode of living and especially his diet do not tend to render him a large or muscular man.—Editorial in The Medical Record.

Parotid Ablation and Pluriglandular Insufficiency.

Neri has shown by experiments on dogs and rabbits that following extirpation of the parotids there are structural changes in the thyroid, ovaries, testicles, pancreas, suprenals, spleen, and kidneys. These changes consists at first in a diminution in the tinctorial reactions, and later in an involution and atrophy of the respective organs with an intra- and extracellular fatty infiltration.—Giornale Internazionale delle Scienze Mediche.

Sprue Treated With Streptococcal Vaccines and Emetine.

In sprue the author administered a vaccine prepared from streptococci derived from the mouth ulcers, where they were found to be present in nearly pure culture, and also emetine hydrochloride hypodermically. In 2 severe and chronic cases the results of this treatment were so strikingly favorable as to appear worthy of record. In the first case, e.g., 1/2-grain doses of emetine hydrochloride were injected hypodermically every other day, and soon after increased to 1 grain. After 2 or 3 injections, and before the vaccine had been commenced, the stools became much less frequent and of better consistency and color. After 8 injections they had become healthy and numbered only 1 or 2 a day. In the meantime the streptococcal vaccine was begun, 50,000,000, soon increased to 100,000,000, being injected once a week. The discharge of pus from the gums rapidly decreased, and in a few weeks completely disappeared, and at time of writing had remained absent for the last four months. Some superficial soreness and redness of the tongue subsequently appeared, from which a streptococcus was also cultivated. A vaccine made from this removed the unhealthy condition of the tongue within a few days, and the patient there-

after was in greatly improved general health.

In view of the very unsatisfactory results of other forms of treatment in sprue (including that by yellow santonin), the rapid and great improvement in 2 successive severe and very-chronic cases is remarkable. In the first case the improvement certainly commenced as soon as the emetine injections were begun, and before the mouth streptococcal vaccine was administered. Yet the author is inclined to attribute much of the ultimate success to the vaccine. In the second case a relapse occurred after improvement had followed the emetine injections, and it was not until the mouth condition had been improved by 2 doses of the streptococcal vaccine that rapid and continued improvement of the stools set in. A milk diet was also of undoubted service in this case, though not found necessary in the first. The author does not look on emetine as a specific in sprue, such as it undoubtedly is in amebic dysentery and hepatitis, but regards it as of some value in certain cases of the disease. One should bear in mind that "sprue" is purely clinical term, and that there may be more than one causative agent, as in "dysentery."—Rogers in The London Lancet.

Foundation and Politics.

Was there ever so grotesque—so Venetian—an aspect of civic freedom as may be seen now on almost any day by any citizen who reads his paper thoughtfully? A few criminals and murderers are on the platform, talking inaudibly, yet they are heard. About the platform is a body of lawyers, sometimes a dozen strong, who are occupied in finding new evasions and writs, while beyond and beneath them extend a mob of many millions, who have lost faith that the penalties of the law can and always will be found for a breach of it. These citizens, who in Horace Walpole's phrase have "outlived the glories of their country," no doubt find the irony of the situation amusing, but their sense of humor is a little strained. Do they ever inquire why these legal activities are not investigated, though studious or at least collegiate activities are objects of Congressional scrutiny? Have they read that the Federal Commission on Industrial Relations has met with the expressed intention of "investigating the activities" of the Carnegie and Sage Foundations, the Baron de Hirsch Fund, the Rockefeller Foundations. It is true that this sorry illustration of the law's ineptitude has been noted in the newspapers,

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but the wretched pantomime of those who conspire to break the law and evade its discipline, a condition of things too ridiculous to be suggested in a comic Utopia, is such a commonplace in our politics that no one appears even to notice it.

The arguments that might be urged against an organization like the Carnegie Foundation seem to us scientific rather than political, social rather than legal. Take for instance the report on medical schools and universities. There were too many institutions, but in this and in other respects there has been an improvement. But the seeds of the change were sown long before the Foundation produced any fruit, if such a term can be applied to its barren memoranda, and even the name of Dr. Andrew Carnegie does not convince us that national taste and education were so crude that no natural refinement and progress were possible. To be above the national taste may be a good thing, but it is to be within the reach of the tyrannical. To found a concern to tell in a dry and tasteless way what the nation can be left to undertake itself, is to make a travesty of national authority which will react injuriously in more than one direction.

American hustle and its gaucherie can be corrected by the influence of the universities, and on the whole, they do this work very well. We know something about universities, and look upon ourselves as entitled to talk about them, at least to laymen. We are firmly convinced that universities improve from within, that they must grow like other things, that even the small and indigent institution leaves an indelible stamp on the mind, that the man who has passed through it is never the same man. It is not the university but the man who is really responsible when he fails. If millionaires can govern universities or make them after their own pattern, there will be less incentive to the student's taste, though there may be a greater incentive to his avarice. It will be a sorry day, when the millionaire, drunk with the gloomy insolence of conceit, takes the administration of learning into his own hands.—Editorial in *The New York Medical Journal*.

Wounds Produced by French Projectiles.

Delorme records his observations made during a period of five days among 700 wounded German prisoners at the citadel of Blaye. He notes the extreme rarity of wounds of the abdomen, pelvis, and vertebral column, and the relative rarity

of wounds of the chest and cranium. He notes, on the other hand, the frequency of serious fractures of the thigh.—*Presse Medicale*.

Suprarenal Extract and Infancy.

Spolverini has not been able to detect the presence of suprarenal extract in the blood of normal infants nor of those affected with a contagious disease. The administration of suprarenal extract to healthy infants gives rise to an increase in the amount of cholesterol in the blood and a diminution in the amount of urea in the cerebrospinal fluid. It also causes a slowing of the pulse and a rise in the blood pressure. These effects are not observed following the use of parathyroid extract.—*Il Policlinico*.

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thmatic affections, it should be combined with steam inhalations to which 10 drops of Sander's Eucalyptol have been added. To avoid disappointment Sander's Eucalyptol should be specified. The common eucalyptus oil, containing as it does all woody extractives, is always irritating and, what is more objectionable, nauseous. Sander's Eucalyptol is prepared from the carefully selected leaves of a certain species, and any admixture of wood is scrupulously guarded against. It has no nauseous effect, no heart depressing action, and is standardised, producing always a constant and definite therapeutic effect.

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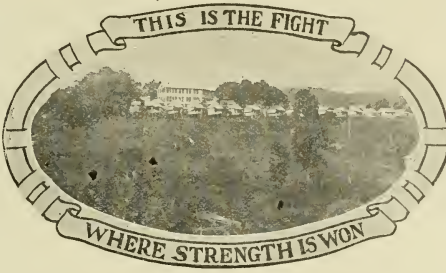
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tory functions of the liver are normally active.

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stimulation, and that the best stimulant of intestinal muscles is the intestinal secretions.

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The Charlotte Medical Journal

VOL. LXXI

CHARLOTTE, N. C., MARCH, 1915.

No. 3

Obstruction of the Esophagus with Report of Illustrative Cases.*

By Stuart McGuire, M. D., Richmond, Va.

Obstruction of the esophagus from accident of disease is sufficiently common to make the subject one of interest to every physician and surgeon. The cause of obstruction may usually be classified under one of the following headings: I. Foreign bodies, II. Spasm, III. Stricture, IV. Angulation, V. Carcinoma. The diagnosis in an individual case is based on the history and symptoms of the patient; the use of sounds, bougies and the esophagoscope; and last but not least on the result of an X-ray examination. I desire briefly to report eight cases of esophageal obstruction that have occurred in my practice. They have been selected from a fairly large series because they illustrate various types of the condition and different methods of treatment.

I. Obstruction from Foreign Bodies.

The first three cases represent obstruction due to the impaction of a foreign body. This accident is most frequently met with in the very young and in the insane. The foreign bodies are usually pins, coins, buttons, pieces of bone or artificial teeth. The points of impaction are either the upper border of the cricoid cartilage, or where the esophagus is crossed by the left bronchus, or where it passes through the diaphragm.

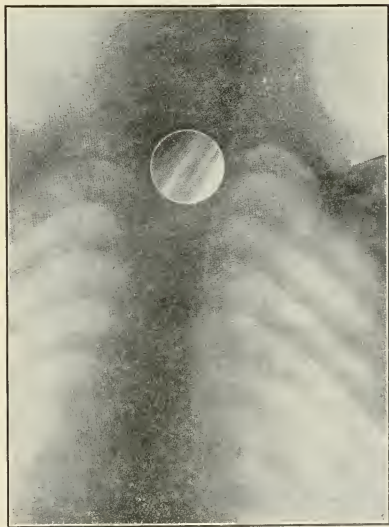
The symptoms are nausea, sensation of obstruction, pain on swallowing, sometimes hemorrhage, and occasionally a reflex cough. In regard to prognosis the size of the foreign body is not as important as the shape. If large it may produce complete obstruction, but this condition forces the patient to seek prompt relief. If irregular or sharp pointed the patient may be able to swallow soft food and hence not recognize the urgency of the condition until ulceration of the esophageal wall leads to perforation and the involvement of the pleura or mediastinum.

The character and location of the foreign body being determined, the practical question is how best to remove it. The hypodermic injection of apomorphia has been successful in some cases, but

vomiting usually wedges the foreign body in more tightly and the use of emetics in this class of cases is as dangerous and unsurgical as the use of purgatives in intestinal obstruction.

If the foreign body is round or smooth, efforts should be made to extract it through the esophagoscope by means of forceps or probangs. If the body is soft, and there is no stricture in the esophagus, it may be practical to push it into the stomach. Neither of these expedients should be tried, however, if the foreign body is pointed, sharp or angular. Here under modern surgical technique an open operation is the safest procedure.

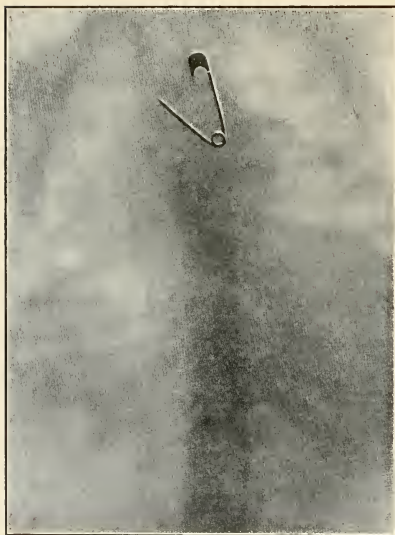
There are two methods of approach: by an external esophagotomy or by a gastrotomy, and the selection of the route will depend on the location of the impaction. If it is opposite the cricoid cartilage an esophagotomy should be done. If it is below the level of the supraclavicular notch a gastrotomy should be performed.



Case II. Glass Stopper in Esophagus. Old plate touched up.

*Read at Tri-State Medical Association, Charleston, S. C., February 17, 1915.

Case 1, D. C., male, aged sixteen years, was a patient at the Virginia Hospital. Five days before admission, the boy sneaked into a kitchen and grabbed a hunk of meat. He was pursued by the cook, crammed the meat into his mouth and attempted to swallow it. The bolus lodged in his esophagus and the obstruction could be located with a bougie just above the cardiac opening of the stomach. The patient had been unable to take either liquids or solids and was suffering horribly from thirst. As there was no stricture of the esophagus, and as the impacted body was soft, a stiff bougie was inserted and steady pressure made, when the bolus was felt to pass into the stomach. The patient was given a glass of water, but was at first incredulous as to his ability to swallow. When the first gulp went down his expression of pleasure was ludicrous, and he drank glass after glass until he had swallowed a quart or more.



Case III. Open safety pin in Esophagus. Old plate touched up.

Case 2, M. S., female, aged ten years, patient at St. Luke's Hospital, gave history of putting the glass stopper of a cologne bottle in her mouth and swallowing it. The stopper lodged in the esophagus opposite the cricoid cartilage and produced complete obstruction. Eight days later she was brought to the

hospital in a pitiable condition from thirst and starvation. A throat specialist was called in consultation, but despite patient and skillful efforts he failed to remove it. It was then decided to do an external esophagotomy. The patient was anesthetized and a three inch incision was made on the left side of the neck parallel with the anterior border of the sterno-mastoid muscle. The deep cervical fascia was exposed and divided. The thyroid, larynx and trachea were pulled forward and the large vessels and the nerves backward, thus exposing the esophagus. A large bougie was then passed to the point of obstruction and the esophagus incised on its tips. The glass stopper at once came into view and was easily removed.



Case IV. Obstruction of Esophagus due to cardiospasm.

Case 3, L. K., baby, aged seven months, was a patient at the Virginia Hospital. The baby while being dressed had seized an open safety pin and put it in his mouth. The mother in her endeavor to remove it, pushed it first into the fauces and then into the esophagus. The family physician and later a throat specialist made unsuccessful efforts to remove it with probangs. Five weeks after the accident the child was brought to the Virginia Hospital. He was feverish, emaciated and evidently in constant pain. A skiagram located the pin in the esophagus immediately behind the heart.

The safety pin was open with the point up and it was evidently impossible to remove it from above. It was therefore determined to do a gastrotomy and extract it from below. The patient was anesthetized and the abdomen opened. The stomach was incised and a finger inserted and carried through the cardiac opening. At first the pin could not be reached, but by the use of an esophageal bougie passed from above it was pushed into a position to be easily removed.

II. Obstruction from Spasm.

The next case illustrates obstruction of the esophagus from spasm. By this is not meant esophagismus but cardiospasm. Esophagismus is a paroxysmal contraction of the upper part of the esophagus, seen in smokers, drinkers and hysterical individuals, which is a functional disease and unattended by organic changes. Cardiospasm is a more or less constant contraction of the cardiac opening of the stomach producing an obstruction which

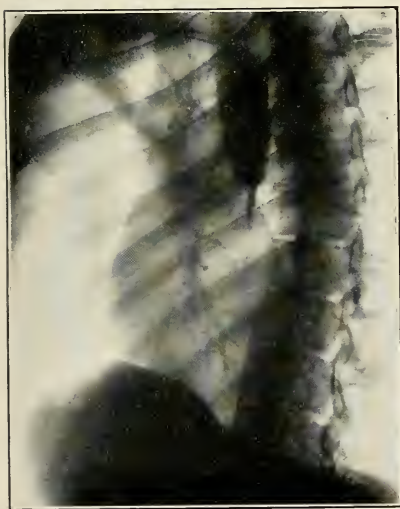
pressed if it is remembered that the stomach has two openings, the pyloric and the cardiac, and that pylorospasm is spasm of the one and cardiospasm is spasm of the other.

The etiology of pylorospasm has been settled and it is known that it is a protective effort on the part of nature to prevent the passage of irritating gastric contents into the intestinal canal. It is a symptom and not a disease and is commonly seen in cases of chronic appendicitis, cholecystitis and ulcer of the duodenum.

The etiology of cardiospasm is undetermined. There are many theories but it would not be profitable to discuss them here, as they are unsubstantiated and contradictory. The condition was formerly thought to be rare, but it is now being recognized with increasing frequency, the accuracy of the diagnosis being demonstrated by the result of treatment.

Patients with cardiospasm are usually thought to suffer from some disease of the stomach. The symptoms often cover a period of many years but vary in intensity at different times. They consist of a sensation of pressure and fullness after eating relieved by vomiting. The regurgitation of food is accomplished with little effort and without nausea. The material spit up may be one or two pints in quantity, and consists of mucous and undigested food without trace of hydrochloric acid or pepsin. If a stomach tube is introduced a short way into the esophagus there is the escape of fluid through its lumen and along its sides. When the tube reaches the cardiac opening of the stomach an obstruction is met which is overcome by moderate pressure continued for a short time. If after emptying the esophagus the patient will drink a mixture of bismuth and buttermilk a skiagram of the chest will show the shadow of the dilated esophagus, with perhaps a small stream of bismuth mixture trickling into the stomach through the spasmodic stricture at the cardia.

The treatment of this condition was formerly very unsatisfactory. Its cure is now simple, safe, prompt and permanent. At first antispasmodics and other drugs were tried without success. Then resort was had to surgery. Miculicz operated on and cured six patients by opening the abdomen, incising the stomach and forcibly dilating the cardiac opening. The result in this series established the principle for successful treat-



Case V. Obstruction of Esophagus due to stricture the result of typhoid fever.

results in organic changes such as hypertrophy of muscles, dilatation and sacculation of the esophagus, and inflammation and ulceration of the mucous membrane. The term cardiospasm is an unfortunate one, for when seen or heard for the first time it is often thought to refer to some disease of the heart. The true significance of the term will be im-



Case VII. Obstruction of Esophagus due to angulation caused by diaphragmatic hernia of stomach. Skiagram before operation.

ment and future effort was to devise a means by which the spasmodic stricture could be efficiently stretched without opening the abdomen.

This problem has been satisfactorily met by Plummer's Hydrostatic Dilator which consists essentially of an esophageal bougie with a collapsible rubber bag at its tip. After the bougie has been passed through the stricture the bag is distended with water and the desired degree of dilatation exerted by slowly increasing the amount of fluid until the attached metre shows the requisite number of pounds pressure. After one or two treatments the spasm disappears, the symptoms are relieved and the patient gains weight and strength in a marvelous way.

Case 4. S. H., male, aged sixty-one, was a patient at St. Luke's Hospital. He stated that for the last ten or twelve years he had had trouble in swallowing. His appetite was normal but food would not go into the stomach. After eating he suffered pain and oppression and then the food either slowly entered the stomach or was vomited. His trouble had recently grown much worse and he now spit up practically all the food he took. He had lost twenty-five pounds in weight

and had become more or less nervous and despondent. A stomach tube was inserted and readily passed down the esophagus until it reached the cardiac end where it met an obstruction. Gentle pressure was made and in a few moments the obstruction yielded and the tube entered the stomach. An X-ray examination after a bismuth meal showed the esophagus full of fluid which was trickling drop by drop through the cardiac opening into the stomach. A diagnosis of cardiospasm was made, and the patient was treated with Plummer's hydrostatic dilators. After being dilated three or four times he was able to swallow without difficulty, and one year later re-



Case VII. Case of diaphragmatic hernia after operation showing stomach in normal position and obstruction of Esophagus relieved.

ported that he had gained thirty pounds in weight and was perfectly well.

III. Obstruction from Stricture.

The next two cases illustrates obstruction of the esophagus from organic stricture, one the result of swallowing concentrated lye, the other the result of a severe attack of typhoid fever. The most common causes of stricture of the esophagus are syphilis, the local action of mechanical, chemical or thermal irritants and the remote results of certain acute infectious diseases such as typhoid fever, scarlet fever, diphtheria and smallpox.

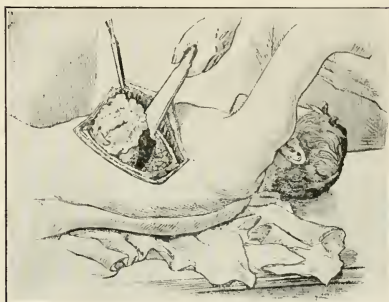
When due to syphilis, the stricture is

usually in the upper part of the esophagus and is of large calibre. The diagnosis is based on the history, presence of other lesions and on the Wasserman test. Stricture due to local irritants or toxic diseases are usually located near the cardia, and are diagnosed by the history and symptoms of the patient, and the use of the bougie, esophagoscope and X-ray. The treatment of esophageal stricture consists in either bloodless or operative dilatation. The expedients which have been employed to correct the condition are ingenious and interesting, but too varied and numerous to be described. If the case is seen sufficiently early it is usually possible to effect a cure by gradual dilatation with bougies or sounds. The treatment requires skill and patience and has to be kept up for months or years. In some cases where the stricture is found impermeable, or where the patient's condition requires prompt relief, the abdomen has to be opened, a gastro-tomy performed and the stricture divided by Abbe's or some other method.

Case 5. A. B., male, aged two years, was a patient at St. Luke's Hospital. Some months before, the child in crawling about the floor found a saucer containing concentrated lye that had been used to remove grease spots, and as babies usually do when investigating new objects, he put some of the lye in his mouth and swallowed it. The symptoms of stricture soon followed. On admission the patient could only take a few drops of milk at a time and was nearly dead from starvation. After long effort under chloroform anesthesia a very small bougie was finally passed through the stricture. A progressively larger sized bougie was introduced at intervals of several days and this treatment continued for some weeks. The child was then sent home with instruction to bring him back at stated intervals for observation and treatment. This was faithfully done by the parents who fortunately did not live at a great distance. When the patient was about six years old the father was told that it was unnecessary to continue the administration of choloform in order to pass the bougie. He hesitated a moment and then said "Please give it to him twice more as that will be one-hundred times he will have taken it and some day he will be proud to tell about it." The boy is now ten years old and is apparently completely well.

Case 6. H. B. R., male, aged 22, was a patient at St. Luke's Hospital. Four months before admission he was taken

with typhoid fever and confined to bed for seven weeks. During the last ten days he was in bed he noticed a progressively increasing difficulty in swallowing liquids, and when he was finally given permission to eat solid food he found that the food would not pass into the stomach, but lodged in the esophagus, where it remained until he either vomited or gulped it up. An esophageal bougie showed an obstruction three or four inches above the stomach. An X-ray plate made after drinking a mixture of bismuth and buttermilk showed a stricture of small calibre and about three inches in length at the lower end of the esophagus. Efforts at dilatation on three successive days failed, but finally a small



Case VII. Cut showing incision in operation for diaphragmatic hernia. Copied from Binnie.

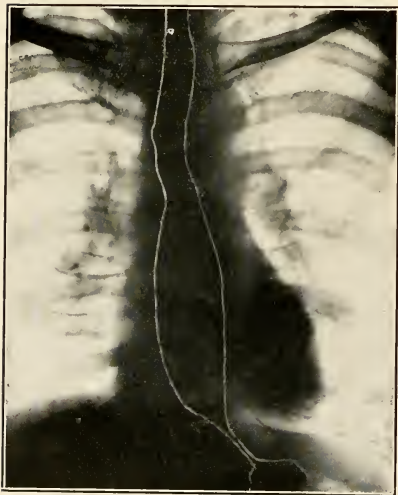
bougie was passed. The stricture was slowly but steadily dilated. The patient remained in the Hospital eighteen days and gained eighteen pounds in weight. He was then sent home to his family physician to have the treatment continued.

IV. Obstruction from Angulation.

The next case illustrates obstruction of the esophagus from angulation due to diaphragmatic hernia.

Case 7. B. D., male, aged nineteen, was a patient at St. Luke's Hospital. He stated that four months before his admission he had been struck in the abdomen and knocked down. His antagonist then jumped on him and cut him with a pocket knife on the neck and outer side of the arm, and finally stabbed him in the left side of the chest. For three days he was unconscious and for three weeks he could take no food by mouth and had to be sustained by nutritive enemata. He then began to swallow liquids, but if he attempted to eat solids he experienced the sensation as though

the food stopped before it reached the stomach, and he would spit or vomit it up shortly afterwards. An attempt was made to pass a stomach tube, but it met with complete block $17\frac{1}{2}$ inches from the incisor teeth. A mixture of bismuth and buttermilk was given slowly by mouth and after eight ounces had passed into the stomach a skiagram was made, when it was found that the man had diaphragmatic hernia, and that the stomach was in the left thoracic cavity. The obstruction in the esophagus was obviously due to angulation. The patient's thorax was opened by raising a rectangular flap consisting of the entire thickness of the chest wall and containing sections of the eight and ninth ribs. Adhesions between the herniated stomach and the heart, lung and pleura were separated, the stomach was returned to the abdominal cavity and the rupture of the diaphragm sutured. The patient made a rapid recovery and was completely relieved of his previous difficulty in swallowing.



Case VIII. Obstruction of Esophagus due to cancer of the cardia.

V. Obstruction from Carcinoma.

The last case illustrates obstruction of the esophagus from carcinoma.

Case 8. J. A., male, aged fifty-nine, was a patient at St. Luke's Hospital. The man's previous history was negative. The present symptoms had begun two

months before his admission and consisted of difficulty in taking food. If he swallowed any solid material it caused pain in his chest and then in a few minutes he could feel it enter the stomach and the pain was relieved. During the last few weeks he had been unable to swallow any solid foods and even liquids remained in the esophagus and were regurgitated several hours after being swallowed. For the past week he had been sustained by nutritive enemata. There was no history of syphilis, of acute infectious disease or of swallowing a caustic. X-ray showed a stricture at the cardiac end of the stomach. An esophageal bougie could not be passed and hence an abdominal section was decided on in order to demonstrate the nature of the lesion. The abdomen was opened, and after delivering and palpating the stomach, a hard, annular growth was found completely obstructing the cardiac orifice. As the disease was unquestionably malignant, a gastrostomy was done by Senn's method, and the patient was afterwards fed through the tube by means of a funnel. He gained weight and strength in a most satisfactory way, and was sent home in good shape. Three months later he was found dead in bed and it was thought it was probable he had committed suicide.

Tuberculosis of the Genito-Urinary Tract.

By F. C. Floeckinger, M. D., Taylor, Tex.

The subject selected is of such importance and the field so large that it would seem impossible to present in details the pathological conditions of the whole Genito-Urinary Tract, and therefore I have divided the subject and will today dwell on the Tuberculosis of the Testicle, Epididymis, Seminal Vesicles, Prostate-Gland and Bladder. I intend to present another paper on a later day on the subject of Tuberculosis of the Ureter and Kidneys. It is peculiar, that if we look over the statistics of causes of death from Tuberculosis in the United States how few cases of Tuberculosis of the Genito-Urinary Tract are recorded. Those statistics of last few years show more death from Tuberculosis of the Genito-Urinary Tract, than ever before. Has Tuberculosis of the Genito-Urinary Tract been on the increase? I don't think so. The reason why we hear more of Tuberculosis of the Genito-Urinary Tract, is because we are getting down to the point, where we lay more stress on proper diagnosis. The Tuberculine test, the improved methods

in our laboratory, where we are able to detect the Tuberculosis Bacillus in the Urine, the Cystoscope and the X-ray all combined are giving us assistance, so that we are able to make an early diagnosis and above all in our present day methods of differential diagnosis by elimination, the physician always will keep in mind the probability of a tuberculous process in the Genito-Urinary Tract. Another factor of importance is the waking up of the general public about the importance of a proper diagnosis before undergoing treatment. Patients are willing on our days to pay a good fee for diagnosis, which you would not have been able to get years ago. The general public also understands to a great extent, that a first glance diagnosis is not good and themselves demand a thorough examination. We have here the same condition, as we find in tuberculosis of the lungs. We must educate the general public in those lines and we will be able then to save many lives, which otherwise must be considered lost. We have the same proposition before us in cases of cancer of the breast. An early diagnosis will save many lives from death, but if you wait until metastases have taken place, then it will be too late. Therefore I consider the predictum of Dr. John B. Murphy as correct, when he states that the end results after amputation of the breast for cancer are as bad as 20 years ago. Therefore education in those lines will be the greatest factor in government economy. Tuberculosis of the Genito-Urinary Tract, has no predilection for certain points, but every tissue we include in this classification may be involved by the Tuberculous process. The Tubercle-Bacillus is a regular tramp and has no predilection for any locality. Not one organ in the human body is barred from an attack of the Tubercle-Bacillus. The cause why we have more Tuberculosis of the Lungs than any other part of the body is due to the atrium of infection. Through inhalation we are more exposed to the investment of Tubercle-Bacilli and even if nature has healed the local process in the lungs a metastatic infection or better to say a Haematogenous infection of another part of the body may take place. The invasion of the Genito-Urinary Tract, by Tuberculosis is nearly always by the blood current. In former times the extension of a Tuberculous process ascending from the bladder to the kidney has been suggested, but investigation has shown us, that this is not the regular route of infection. This has been proven by observa-

tion, that in those cases we find active or latent Tuberculous processes in other parts of the body. Now if those Tuberculous lesions outside the Genito-Urinary Tract, are primary or secondary has yet to be decided. Authorities are still squabbling about this question. Not only the arterial blood carries the Tuberculous Bacillus, the Venous system carries same as well, as stated by Albarran. Autopsies on patients, who have died from Tuberculosis of the kidneys have shown, that the lymphatics do not carry the infection from below up to the kidneys, because all the lymphatics of the kidneys carry the lymph away from the kidneys and Tubercle Bacilli do not travel against the lymph stream. Therefore we must come to the conclusion, that ascending Tuberculosis of the kidneys by way of the lymphatics does not exist.

Those cases, in which infection of the kidney took place by extension from the ureter have proven to be secondary due to the perforation of outside foci into the ureter. The testicle, bladder and kidneys are the organs of the urinary tract mostly affected primarily. The predilection of focalization of the Tubercle Bacillus in the testicle in children is different from those of a grown person. If we study closely the etiology of those infants affected with Tuberculosis of the testicle during the first two years of life, we must come to the conclusion that heredity plays an important part. Of course it must be understood, that Tuberculosis of the testicle is not always the primary Tuberculous-process in the body. There may be visceral Tuberculosis present. A. L. Goodman made a study of 91 cases of Tuberculosis of the testis and found, that nearly one-half of them occurred in infants under 2 years of age. Fortunately in infants the process is well localized and does not extend above the inguinal ring. In grown people there are certain predilecting points in tuberculous affection of the testis. In those cases nature plays a very important role of self-eradication, as the microscopical appearance of the mass will show. This mass has a certain tendency to outline itself and becomes encysted. Connective tissue formation takes place the same as we find in healed processes of the lungs.

By this sclerotic process, as I may call it, the result will be atrophy of the testicle. In infants we very seldom find a suppuration of the tuberculous nodules with fistulous tracts developing. A clear cut tuberculous process to our ideas never suppurates, if a mixed infection does

not take place. A pure case of tuberculosis of the lungs has never killed a patient. It is the mixed infection which brings the end and the same way it is with the testicle. Now why is it, that so few cases of tuberculosis of the testis in infants suppurate and form fistulous tract? The explanation of this process is following: The Tunica Vaginalis becomes always the seat of profuse exudation and finally both layers become adherent and form a regular shell round the Orchis. The lesion is generally unilateral, but in grown people we will find the process bilateral.

The beginning of the tuberculous process in the testis shows itself in a very benign form by the formation of nodules and granulations and often are not recognized until a mixed infection takes place and suppuration occurs, which finally breaks through the skin. The mixed infection must not necessarily come through the blood stream or the lymphatics. It may come through the vas deferens from the urethra, prostate and

seminal vesicle. In grown persons the tuberculous process of the testicle always begins at first in the epididimis at the globus minor or globus major. (Fig. I). This primary focus will demonstrate itself in the formation of nodules and if a mixed infection takes place through the vas deferens, then suppuration will take place into the orchis proper and cause complete destruction of this organ. (Fig. II.)

The most common cause of mixed infection of a tuberculous process in the scrotum is the Neisserien Bacillus. It has been proven, that Neisserien Bacillus may lay dormant for many years in the posterior part of the urethra and the vesicular glands and prostate. In a plain case of tuberculosis of the testis nodules will form, which coalesce and caseate and so destroy the whole epididimis and later the Orchis proper by Necrosis.

With the progress of the disease adhesions form with the tunica vaginalis, scrotal tissue and skin and finally break through forming fistulous tracts. In

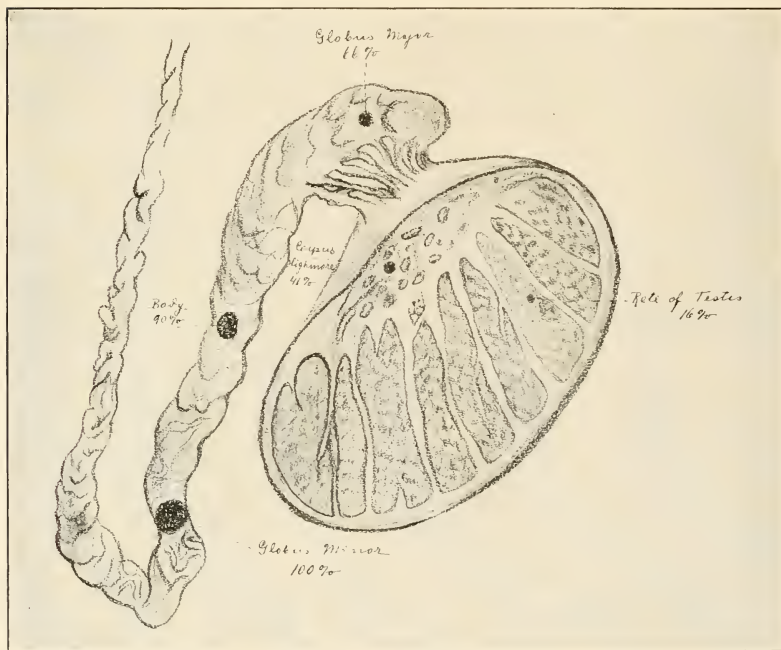


Fig. 1. Tuberculosis of the Testicle. This diagram shows the tuberculous deposits in the testicle. (Copied from Murphy's Clinic.)

some cases the process becomes stationary and the patient will even not consult a physician, because a tuberculous process in the testicle is not very painfully. The pain is mostly a dragging pain, but not of a sharp cutting character. After exercise the testicle may swell up and go back in size again after resting. The testicle is not painful to pressure and to the touch. In some cases there is a bloody or whitish discharge from the urethra. Surgeons have been on the warpath with each other to determine the primary cause of same. Some claim, that it is due to tuberculosis of the prostate, posterior urethra or seminal vesicles and others think it is due to irritation of the posterior urethra. The last statement has been accepted by the majority of surgeons.

As the involvement of the prostate, seminal vesicles and posterior urethra is secondary, it is important always to keep the primary tuberculosis of the epididymis in mind. If the ascending infection has involved the posterior urethra, prostate and seminal vesicles, the patient will complain a good deal about frequent micturation, which at times may become a regular strangury. There is pain at the neck of the bladder at the end of micturation and as the process progresses, the frequency of urination becomes more and marked and when the patient tries to hold back from emptying the bladder, involuntary urination will result. Those symptoms all disappear like magic, after removal of the tuberculous testicle. Murphy reports a case of a clergyman who showed those foregoing symptoms in the

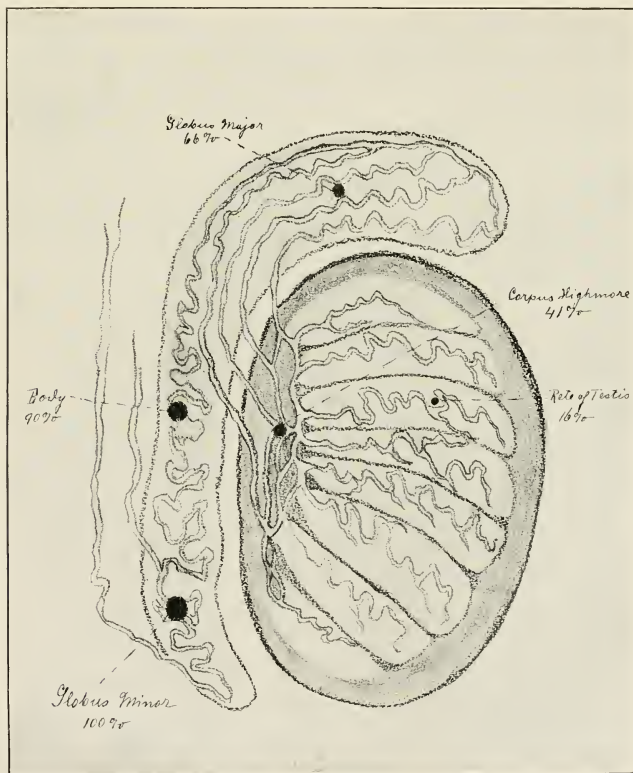


Fig. 2. Tuberculosis of the Testicle. Schematic drawing of Fig. 1. Testicle and Epididymis laid open. (Copied from Murphy's Clinic.)

superlative degree and after removal of the tuberculous testicle all those symptoms disappeared. As to the treatment of those cases, it will depend entirely on the stage of the pathological process. If early diagnosed, the simple ablation of the epididymis from the testis proper will be sufficient. Of course individual judgment of the operator is essential in selecting the *Modus Operandi*. If the testis proper is involved, remove same entirely and if necessary do not spare the *Tunica Vaginalis*. Those cases in which the skin is involved by fistulous tracts should be treated openly by jodoform gauze packings. But the testicle must be entirely removed at first. I found that in tuberculous processes we have in the old Jodoform still one of the best antiseptic.

Those cases in which the skin and Dartos is not involved, will heal by prima union. Even if we should have to deal with a testicle which has broken through into the *Tunica Vaginalis*. In those cases I apply a method which has proven so successfully after Nephrectomy for a tuberculous kidney. The cavity is filled up with a normal salt solution and sutured. Always close the *Tunica Dartos* separately with a suture, so you don't carry infection from the skin down to the *Tunica vaginalis*. We must not forget, that the scrotum is one of the hardest places to get in a surgical clean condition. The question also arises as to the proper treatment of the seminal vesicle, if affected by tuberculosis.

Nearly all surgeons of experience agree that the best way is to let the seminal vesicle alone. As tuberculosis is a self-eliminating disease by the process of cicatrization, therefore all you have to do is to remove the continued source of infection and the seminal vesicles will atrophy and the process will be brought to a stand still. If the seminal vesicles are involved to an extent that the outside capsula has not been perforated and periseminal infiltration has taken place, then the abstinence from doing surgery of the seminal vesicles will be rewarded. If you do try to remove those vesicles, you are likely to break down the vesicle and contaminate the surroundings with the result, that the lymphatics will carry the infectious process farther and you may develop a case of miliary tuberculosis. Therefore don't do too much surgery and give nature a chance and you will be rewarded with good results. But remember, remove all the primary focus in the scrotum, otherwise you will have a nasty case to deal with in the future, and it will

take all your patience to get satisfactory results. We all know how the general public feels about those onhanging cases, and it certainly will not help us getting a reputation, if we do not cure our patient. It is the hardest thing in the world to cure such cases, in which fistulas have developed and the proper treatment is depending on a trial of the different methods. The following methods have been advocated.

1. The injection of Bismuth Paste, which has given some cases very good results.

2. The use of condensed light.

3. Excision of all the fistulas with subsequent packing with Jodoform gauze.

The first and third method have given good results.

Tuberculin has not given good results.

It is necessary to make an early diagnosis and the history itself with the aid of the tuberculin reaction to which I will refer later in the paper should be sufficient to let us make an early diagnosis. But again only thorough removal of the infected tissue will give good results.

Tuberculosis of the anterior urethra and penis I will exclude in this paper, being such a rare condition and therefore of not enough importance to consider. Any textbook on genito-urinary surgery will give you all the important details of those cases. The next subject I wish to dwell on is the tuberculosis of the posterior urethra, prostate and neck of the bladder, and seminal vesicles. Tuberculosis of the posterior urethra is never found individual, but always with other tuberculous lesions in the prostate and seminal vesicles. If the prostate gland is affected, it is generally unilateral and rectal examination will reveal a pathological condition. Tuberculosis must always be suspected, if we find besides the induration of the prostate gland a thickening of the seminal vesicles. By the rectal examination we are able to outline the seminal vesicles which is soft and tender to the touch. If the disease has advanced, we will feel nodules alternating with softening of parts of the seminal vesicles. The prostate gland will be felt somewhat enlarged and palpitation alone will not give us any definite points as to the pathological condition present. If the disease has advanced and nodules can be felt, then the diagnosis will be very easy, but in the beginning of a tuberculous process of the prostate, palpitation will not give us any definite point. In those suspicious cases a milking of the prostatic secretion by way of the rectum will bring forth a little pus

like bloody secretion, in which after centrifugalization tubercle bacilli may be found in nearly all cases. Besides the tuberculine reaction will be positive in all cases. Another diagnostic point to be considered is, that a tuberculous process in the prostate does not develop as rapid as a specific infection. A tuberculous process of some length and the systematic symptoms if such are present are not of such a virulent character as in specific infections.

There is still considerable dispute as to the extension of the tuberculous process, whether the process begins in the prostate and travels down to the epididymis, or begins primary in the epididymis and travels upwards. No doubt that ascending tuberculosis has extended to the bladder, urethra and kidney, producing a typical tuberculous condition in those organs, but those cases are very rare.

As before stated, there is no doubt that by the blood stream tuberculous conditions have developed in distant parts, the patient afflicted with miliary tuberculosis. In the differential diagnosis which rest between tuberculous infection due to the specific bacteria, hypertrophy of the prostate must be considered. The history of the case, the physical findings, the repeated laboratory tests, the Cystoscope and the inoculation of animals will always give us sufficient points to make a diagnosis by elimination.

Tuberculosis of the bladder is very seldom primary, and then it is only present in cases, in which a miliary tuberculosis is present. The treatment is very unsatisfactory, because those cases of tuberculosis of the bladder are advanced to such a stage, that a cure is almost an impossibility. In tuberculosis of the bladder symptoms of vesical irritation are predominating. Haematuria is to be found nearly always. A Cystoscopic examination will show us always the tuberculous process in the bladder. We also find cases, in which other pathological conditions in the bladder are present in connection with the tuberculous process. I had a case under my care of a patient, who suffered from multiple papillomatas of the bladder and a tuberculosis of the bladder, too. In this case the tuberculosis was secondary to a primary tuberculosis of the lungs. A suprapubic Cystotomy was made, the papillomatas excised with the thermocautery and a permanent suprapubic drainage established. This operation gave the patient great relief until the patient finally succumbed to the miliary tuberculosis. Fulgeration was not

executed in this case, as same was of a hopeless nature.

Prognosis in all those cases is bad from the start and all that can be done is to give the patient relief. This refers to the tuberculosis of the bladder. Tuberculosis of the testicles will be cured, provided a thorough excision of the whole affected area is made, even if the seminal vesicles are involved.

Tubercle vaccine has not proven to be a specific in those cases and the best men in the world have given this treatment a fair trial. The cause is, that in many cases when a positive diagnosis of tuberculosis of the bladder has been made, there are already other organs in the body affected with a tuberculous process.

I have used the following method of tuberculine reaction in my practice and found same to be absolutely reliable.

A proper dilution is made from the old tuberculine Koch made by Lucius and Brunning the following way:

Take 1 cc. of Koch's old tuberculine and add to it 9 cc. of one-half per cent. carbolic acid solution.

This makes a dilution of 1-10, called Solution No. I. Take of the solution No. I, 1 cc. and dilute with 9 cc. of a one-half per cent. carbolic acid solution.

This makes a dilution of 1-100, called Solution No. II.

Again take 1 cc. of No. II and dilute with 9 cc. a one-half per cent. carbolic acid.

This makes a dilution of 1-1000, called Solution No. III.

After having prepared all the solutions, give the patient 1 cc. of Solution No. III and wait for 24 to 36 hours. If no rise of temperature takes place then give after that time 2 cc. of the same dilution. Wait again 36 hours and if no rise of temperature has taken place give one-half cc. of Dilution No. II, and if then there is no rise of temperature give after the 36 hours another injection of 1 cc. of Dilution No. II. If then there is no reaction, we can very well exclude tuberculosis.

The reaction, if positive will show itself in a rise of temperature which will come on about 24 hours after the injection. If there is a rise of temperature a few hours after the injection, it is not due to the tuberculine, but to other influences.

I like this old method better than the one employed by the staff of the Mercy Hospital of Chicago, because you are liable to get a very severe reaction sometimes, a high temperature up to about 104 to 105 degrees, vomiting and rigors. In using smaller doses you will overcome

this strong reaction. This method will give us every time a positive reaction, if we have an active tuberculous process, going on in the body. It will not react in healed tuberculous processes.

The Van Pirsch's test is not reliable, as it will also show in healed tuberculous processes. Same about the Morros test. From all the foregoing points we may come to the conclusion, that can be put up in one sentence. This is: make an early diagnosis; don't overlook any tuberculous processes in the body and act promptly by surgical interference and radical and we will be able to save many lives and organs.

The Great Battle of Life; Labor.*

By W. E. Reynolds, M. D., Hopkinsville, Ky.

In writing this article, I wish to confine my remarks to normal labor, with my experience and a few technics that I fail to find in text books. This may seem a little egotistic, and to better fortify myself on a subject that has been fought out to a frazzle for over a century or even since the origination of the academy of medicine; I would say if a man that has given his close attention to a subject for thirty eight years and has no sheaves, fruit for repentance he should be considered as the man with the one talent. I very well remember the first case of labor I was called to see, and on my way the many times I thought of sending for a doctor; this was a normal labor and done well, and would have done as well without any one; however I was complimented to such an extent that I had to bite my finger to know who I was. But the next two cases I had was one of eclampsia and postpartum hemorrhage alternate; I might mention, I had no time for biting fingers in those cases. I will digress here to say, all cases are not normal, and you had better carry your gun and ammunition as you never know at what moment you may need all at your command.

We will now borrow or draw on our imaginations, a calm still May morning as the steel gray of twilight appears in the east, to welcome a visit to the country, cherished by the hum and bustle, of the farmer, the perfume of the fragrant flowers, and the melodious songs of the mocking bird, this gentleman makes us forget the cares of this life and if this is a case of no compassion, we have at least some pleasure in re-

lieving a poor suffering woman. Our first attention after being ushered into the room is the appearance of our patient the character of pains, and if this does not warrant an immediate examination I defer my examination until I enquire into every detail. If this is her ninth or tenth month, of gestation, if her kidneys have been acting sufficiently, bowels open, and if they have moved that morning, whether she has swelling of the feet and ankles, puffing of the face, dimness of vision, vertigo or glimmering before the eyes as if looking over a hot stove; headache, etc. So many of these questions may be asked as to warrant you against pleural eclampsia or other troubles. After this verbal examination a few pleasant words of encouragement may be a source of great relief to our patient, in establishing her confidence and trust in this critical and most dreaded moment. To lay down a rule for every physician in this respect would be absurd, and every one has a rule unto himself and should meet the occasion best suited to this individual case and his peculiarities. For a physician of grave demeanor to look cheerful, and a man of lively spirit to look grave, is to make both artificial and more like fools than rational beings, a state of matter less likely to establish confidence or engender esteem.

By this time you can prepare for a good country breakfast; and after returning to the room our patient is having pains sufficient to shield her modesty, we may proceed to an examination. If especially a primipara we should engage her mind by telling her what was necessary in all cases of labor, calling her attention to the rupture of the membranes, for fear of some excitement caused by a gush of water during a pain. After cleansing my hands I oil my right fore finger with preferably lard, and proceed to make a thorough examination, with this examination I find in normal labor, presenting, we will say the first position of the occiput. This may be the head of a ten months gestation, of large size, with fontanelles perfectly ossified presenting within a undilated os, with cervix so long that the head may pass over the perineum by the time of the completion of the dilatation. Also a pelvis that the symphysis approaches the upper segment of the sacrum causing a prominence of the vulva, and also causing the head to meet with quite a resistance before the pains forces the head beneath the symphysis, next to engage the shoulders

*Read before recent meeting of Academy of Medicine of Hopkinsville.

before the head commences to distend the perineum; while if we had a prominence of the symphysis, the head would be pressing on the perineum, at the same time it was engaging the pelvis. This accounts partly for some women having so much better time or labor than others. Again we can have an over distention of the uterus with Liquor Amnii, there by weakening the longitudinal muscular fibers of the uterus, and contractal power of the abdominal muscles. It is generally conceded that the longitudinal muscles play a great part in dilatation, by forcing the membranes of water through the os, consequently a relaxation of the circular muscles: while this is true, I have met with a great many cases that was suffering with very slight pains and on examination find the os perfectly dilated with no distention of the sacks of water, even during a pain. Again we meet some cases with scarcely any water at all. I have had some I didn't think there was a half pint, in such cases the membranes are so closely in contact with the head that to rupture it would be almost an impossibility and often delivered in tact. This necessarily is a long tedious and hard labor; as the head has to force its way through the undiluted os, and some times there is an expulsion of the placenta with the baby.

The nates presentation have no special note except we should direct our attention to the delivery of the head; by all means change any presentation to the first or second just after the delivery of the nates, or if you should have the third or fourth and make traction, the arms would be left above the symphysis, the humerus would naturally lodge in the arch of the frontal bone on either side of the nose; making it impossible to deliver without a change of position, as I was called to do in three cases for physicians that I considered in point of knowledge equal to, or beyond an average physician.

This condition has been the cause of the fracture of the humerus in many cases and should have been avoided; and if such a case should present itself don't break the arm, it is unwarranted and should be condemned by the profession. Rotate the body with the occiput under the symphysis; then it will be as easy as unlocking a safe, when you understand the combination.

I might mention here that fractors of the humerus have been caused, after the delivery of the head of a large baby by jamming the fingers under the humerus to assist in the delivery of the body. This

is a grave mistake, and likewise should be condemned. To those who may take issue, I would ask under the same conditions would you proceed as before.

In delivering the head, which is the only important part, I place the back of the child in my left hand with my first and middle finger under the shoulder on either side of the neck. With gentle tension assisted by the four right fingers in the mouth, I rotate the head over the perineum. This procedure is done so quickly that we never fear cutting off the circulation by pressure on the cord.

We may have many obstructions in normal labor such as are laid down in text books, feces in the rectum, full bladder, etc. Tumors and other troubles of any consequence might be considered an abnormal Labor.

I wish to mention that in making my first examination I try to make it as thorough as I can, and when I am satisfied I never put my finger in the vagina any more except to rupture the membrane if necessary. As few examinations as possible, prevents pain, soreness, and some embarrassment as well as abrasions, which would be liable to be a source of infection. We should always be sure not to rupture the membranes too soon, but after dilatation is complete we save our patient of many pains and worry rupturing them, and allowing the uterus to better contract and expell its contents.

I wish to mention, if when I make my examination and find but little or no dilatation, I inform my patient that these pains are preparatory to labor, and that she will do better and feel more able to go through labor to be up. After giving such instructions as to the preparations of her bed, I leave the room to only return as I think necessary.

In all my labor cases I advise to lie on her back, and when I have slow progress I make some changes, such as, if my patient has been pulling against some ones hands, I direct her to place her hands on her thighs, and push, also elevate the head and shoulders above a level of the body, tuck her chin and slightly raised the hips, this position raises the symphysis pubes above the head thereby encountering less resistance. Or I may place my patient on her left side, this may rotate the infant from some lodgement upon the pelvis, which had retarded labor. I have had good results from these changes.

The old time instructions to support the perineum, I never have practiced

The early writers recommended only in this stage lubricants and emollients. About the middle of the last century, Smellie advocated artificial dilatation of the external orifice of the vagina. Puzos stretching of the parts, along with the lubricants. And Roederer, pressing of the perineum towards the sacrum. All of these modes of treatment differing greatly from the modern procedure. To whom the practice of support of the perineum is originally due is a matter of doubt. The most of the ancient writers agreed that a support was a protection to the perineum. But not agreed as to what "support" is, or to what extent, it is to be practiced. It would carry us far beyond the limits of this paper to go into the details of the various others on this subject. So we will refer briefly to only a few. Dr. Ramsbotham tells us as soon as the head begins to press on the external parts, it is our duty to sit by the bedside continuously, and place the elbow against the bedstead, regarding it as a fixed point and allow the perineum to be forced against our hand. Dr. Tyler Smith pointed out many years ago that pressure upon the perineum is apt to excite the uterus to increased contractions. Churchill recommended very gentle support, and informed us that it has been his lot to witness more than one case of rupture from excessive and unjustified support. Naegele plainly says, under ordinary circumstances, any support of the perineum is unnecessary. Leishman says, it was a careful study of these opinions, among others along with a through observation of the processes in nature, which led us long ago to condemn support of the perineum as irrational and useless in all cases, and undoubtedly harmful in some respects, two points must here, however, be borne in mind: that the perineum must sooner or later yield, and that support necessarily implies opposition to the progress of the head, if therefore we admit support as a rule of practice, we shall find ourselves opposing a natural process, and presuming to teach nature a lesson, again the practitioner who never touches the perineum will have less ruptures than those who give firm support. In my practice I have always followed Leishman. I keep my finger on the margin of the perineum and take into consideration the severity of the pains and the forcible giving away of the soft parts, with the characteristic tension and thinning of the perineum, which warns me of

danger when I in a gentle calm voice direct her to turn loose all support, not to bear so much to her pains, talking continuously to her keeping her mind engaged in the direction you wish and you will save more perineums than any other way, however careful as we may be, this will some times occur, and oftener by the shoulders than the head has been my experience. And if we leave this part of birth alone to nature, we would have less lacerations, for instance, instead of trying to lift the bottom shoulder over the perineum with the upper against the symphysis, would present the long diameter, when if left to nature the upper shoulder would pass out from under the symphysis then we would have the short diameter and need no assistance.

It is not our intention to deal with abnormal presentations, but will mention here, that there are some abnormal presentations that can be changed to normal at the right time and the proper stage. During the last expulsive pains I place my left hand over the abdomen and at the ending of the last pain I assist the expulsive contractions by gentle pressure, thereby aiding a better separation of the placenta and membranes. Next I examine the patient's pulse and if I have a frequent and feeble pulse, I suspect hemorrhage, and direct my treatment to external manipulations of the uterus. If however the pulse and infant are all right, I delay no time but proceed to ligate the cord and deliver the placenta, of course I first see that I have good contractions before I attempt to deliver the placenta. To wait longer would subject our patient to a waste, if not a hemorrhage. As we have more or less contractions and relaxations until the placenta is delivered. I see no reason for a delay when we always have in normal labor a partial separation of the placenta, and if the last expulsive pains are slightly assisted an entire separation, and often expelled and laying in the vagina. To delay in the delivery of the placenta, would give time for the circulator muscles of the uterus to regain their normal contractility and be more trouble for the delivery of the after birth. Another reason for non delay is, in all infants after delivery and before the separation of the placenta we have two distinct circulations, one from the mother to the right auricle through the foramen ovale and also ductus arteriosus causing a circulation independent of the lungs, at the same time we have

an imperfect normal circulation. So the sooner we establish normal circulation after the lungs are inflated, the more perfect will be the closure of those abnormal openings and more thorough oxygenation of the blood, and avoidance of cyanosis.

I will mention briefly here, the portal vein carries the blood to the liver from which the bile is secreted, the hepatic vein carries the superfluous blood from the liver and the bile duct carries the bile secreted by the hepatic cells, and as these vessels are connected to the ductus venosum, we have, while this vein is performing its abnormal function by delayed or imperfect closure, a flow of bile through this duct into the venecaver a source of icterus neonatorum.

Since I have adopted the plan of ligating the cord as soon as I establish thorough respirations I have no blueness or very little jaundice.

I have long since abandoned the old way of leaving a finger length of the cord to be a source of infection and stench, but ligate as close as convenient, say about half inch. Then after cleansing the baby I cover with talcum powder and a small bach of absorbant cotton and adjust a bandage sufficiently tight that it may not slip, this neglect is a source of more trouble with babies than any three others, causing the nurse or some lady friend to suspect colic or hives or some other trouble too tedious to mention and give every conceivable slops on the place, when it was only the bandage was too loose and pulling on the cord. Also we have less amount to dry up, consequently shorter time for exfoliation of the cord. While the baby is being washed I deliver the after birth, and if my patient is not too much exhausted I proceed to remove the clothing under her and place others for the protection of her bed. If however, my patient is worried, I defer this until she is rested. Then I remove everything damp and apply a cloth sufficiently large to take care of the discharges and adjust a bandage. Let this be applied as tight as comfortable, below the taper of the hips so it can't slip up take a fold up at top of binder on either side, so it will fit the abdomen, this being done, I direct my patient that within six hours she should empty the bladder. To do this turn her on one side, draw up the upper leg at right angles then the assistant can raise the hips which places her on her knees and chest, then adjust the vessel without any strain or worry. In twenty-four of forty-eight

hours the bowels should move. I direct a dose of epsom salts, castor oil, or senna leaves made into a tea.

There are many things that might be mentioned, but this about ends the most important points in normal labor. Next and after all great battles, is to take care of the spoils, which in my next paper we will discuss the last, but by no means the least important section of my subject, care of mother and baby.

The Passing of the Physician of the Old School,

By T. E. Wannamaker, Jr., Cheraw, S. C.

Prompted to write upon this subject by the devoted love and admiration which I have for many of those whom we call "Doctors of the old school," yet I hesitate, for it would be an excellent subject for one of our profession more skilled with the pen.

Actions speak louder than words and so their lives stand out to those who have known them like the pyramids of Egypt when Napoleon told his men, "Yonder centuries look down upon you." Just so these men represent the medical knowledge of centuries, and these look down upon you today. Honor, respect and emulate them for the profession they have handed down to you. There are few of them left and they are passing away one by one, a type of man from whom the flush of life is departing.

I beg you with heart and mind go with me further into the lives of these men. We find those who are left, our seniors in the medical fraternities, often our most devoted attendants at the meetings, though the infirmities of age be upon them, zealous for any work which uplifts the profession and is of scientific attainment. Ready to tell of their experiences, their calamities, as well as evidences of their superb skill, but you will usually find them modest and more ready to praise the work of others; a grand poise for the truly great. They are men cultured and dignified, but kind, humble and self sacrificing; well known and loved by their fellow men. They are influential political leaders and being well educated intellectually, so have they cultivated a high sense of morality and can be found standing for what is good and honorable. Even too they are mostly religious men and take an active interest in the welfare of their churches. We meet them on the street kind and pleasant and even speaking to the children who reverence and respect them.

See him, old and gray, tottering along

in the profession, somewhat active for his age, willing and ready to serve, he will surely die in harness. Around him the men, women and children gather for they all love him and he belongs to every family, rich and poor. He has dined with them and sat watch many sleepless nights over their loved ones. For he has been both doctor and nurse. He has lived close with his fellow men, hence better able to feel their suffering. Imagine a life burnt with the fuel of sympathy; inspired to greatness by the deserved confidence of his fellow men.

Pity him, for his fine span of horses and carriage go with him to the grave. There is no place for them longer on this earth, save to be sold at public auction as mere dray horses or to be used cruelly on the farm, for the automobile will take their place. Much could be said of this old doctor's love and affection for his horse and co-worker and of the horse's devotion to his master. The two greatest living examples of self sacrifice; remember, I beg you, this gentleman of the old school.

Chalmers Melancthon Van Poole.

Edited by Drs. D. W. and Ernest S. Bullock, Wilmington, N. C.

Chalmers Melancthon Van Poole, A. M., M. D., the subject of this sketch, was born in Rowan County, N. C., near Salisbury, September 2, 1854. His father was Otho Van Poole, a gallant cavalryman in the Confederate army. His father's ancestors came from Holland and had been an efficient line of mechanics in their locality. It naturally follows that Dr. Van Poole inherited some of the mechanism of his forefathers, which merged into his fine intellect and whetted his wedge in the medical world.

Dr. Van Poole began his education in Craven Public School in his early youth, and later entered North Carolina College, from which institution he received his A. M. degree. He read medicine with the late Dr. Marcellus Whitehead of Salisbury and graduated from the College of Physicians and Surgeons in Baltimore March 18, 1880. The following May he was licensed by the Board of Medical Examiners to practice medicine. Not being content to begin general practice without further preparation, he returned to Baltimore and was elected resident physician of the Maternity Hospital, where he taught as assistant in obstetrics; at the same time he did post-graduate work at the City Hospital. He has always done a large general practice

and has been eminently successful in his work. He keeps well abreast of the times and spends a part of almost every year in one of the post-graduate schools of the North. He has specialized in diseases of the nose and throat and stomach, and has given considerable attention to the treatment of these diseases.

Dr. Van Poole has always shown much enthusiasm in the society work of his profession and holds that every young doctor should at once connect himself with all of the medical societies he can attend. When licensed in 1880 to practice medicine he immediately joined the State Society and for thirty-five consecutive meetings did not fail to be present at its annual gatherings—a record unequaled by any other physician of the state. For five years he was Treasurer of this society and has recently served as its President. He is a member of the District and County Societies, being at present President of the District Society. During President Taft's administration he was appointed First Lieutenant of the Medical Reserve Corps of the United States Army. His close attention to all of his society interests has been a stepping stone to better things.

During his medical career Dr. Van Poole has contributed largely and helpfully to the medical press, among other things articles on Quackery, Abortion, Effects of Alcohol on the System, Atropia in Diseases of the Eye, Some Remarks as to the Science of Medicine and the Comparison of Ancient with Present Day Progress of the Same, The Importance of Thorough Qualification Along the Lines of Literary and General Scientific Training Prior to Entering the Medical Profession and the Maintenance of High Ideals after Becoming a Member of Same, Public Health and Preventive Medicine, The Relation and Duty of the Physician to the Nation in War and Peace.

Dr. Van Poole's love and interest in his work prove that his vocation has been well chosen. He practices his profession from a conscientious standpoint—always putting the interest of his patient and patron before his own. The dangers and hardships he has undergone in their behalf have been many and direful. In order to reach some of his patients he has been known to cross streams so swollen as to necessitate his horses to swim and his buggy to float, thus risking his own life, and this in itself is truly indicative of his deep love and sympathy for all humanity. Every year adds new work



C. M. VAN POOLE, M. D., SALISBURY, N. C.

to his already enormous practice, but with all he never loses that genial, good natured disposition which has always been a great factor in making his life work pleasant and easy.

Financially Dr. Van Poole has been quite successful. Investments in real estate, factory stocks, etc., were well placed and will tend to make his life easy when he is no longer able to do active practice. His home, located on the corner of Ellis and Monroe Streets, is one of the prettiest in the city, being provided with all modern conveniences.

He is at present president of The Rowan Mutual Fire Insurance Company, an organization representing and protecting more than a million and a half dollars in Rowan County alone.

It is good to note that amid all of his professional duties Dr. Van Poole has always found time to attend strictly to his religious obligation. When yet a youth he was converted and became a member of the Evangelical Lutheran Church and for the past thirty-five years has served continuously as elder or deacon in his church. He is an untiring worker in the organized work of the Sunday School; has many times served as president of his Township and County Conventions and three years ago was president of the North Carolina State Sunday School Association. He has always been much concerned about the moral and material interests of his community, giving freely of his time and means for the higher education and general uplift of the people.

The Doctor as a Business Man.

By G. G. Thornton, M. D., Lebanon, Ky.

Members of the Marion County Medical Society, (Ky.):

The doctor is supposed to be a professional and not a business man, and this supposition is in the main correct, though in my opinion the profession is gradually attaining more and more to business proficiency.

In time gone by but which many of you men older than myself can remember, the doctor was expected, (and rarely disappointed the expectation) to answer all calls, regardless of the weather or time of night, without asking any questions about the pay, or the prospects for pay, and when the work was done after a long wait he was expected to apologetically mention the matter to the head of the family and explain that he needed the money.

The general feeling seems to have been that if a poor fellow or some of his family were sick, that the doctor could and should administer to his needs from a humanitarian standpoint, and trust to chance for remuneration. At this time too, it was no uncommon thing for the man who did pay his bills, to think and so express himself, that he and others who did pay, paid enough above the services received, to pay for their non-paying neighbor. This may have been true in days gone by and more or less satisfactory to all concerned, but times have changed very much now and our profession must, if it continues to hold the high standard which it has assumed—nay which it occupies, adjust itself to the business methods of the present. There are many reasons for this. In the times referred to, the educational standard was much lower, and the cost to enter on a professional career was almost nothing as compared with the first cost of medical education and equipment for practice now. Then the proportion of men who could and would pay their bills was much greater than now. Then the science of medicine was advancing so slowly that it was not expensive nor difficult to keep abreast of the times, while now the science is advancing by leaps and bounds, it is both expensive and difficult to keep up in literature and instrumental equipment. The average young man now, thinking of preparing himself for the profession, and who expects to open an office in a progressive town or city, should understand that he will need enough money by the time he graduates and equips himself with books, instruments, office outfit, horse and buggy, or automobile, to buy a pretty good farm. He should also consider the fact that when he places his money in this education and equipment that it is practically dead capital, except when he is well and working. He should realize that should he become incapacitated for work in his chosen profession, on account of loss of hearing, sight, sickness or accident he can realize very little on his investment. When the doctor dies, as a rule, his reputation and fame count for very little as assets to his estate.

The original amount invested in an education ceases to be a revenue producer, and the investment is worthless. His books have become a back-number and sell for probably less than one per cent. of what they originally cost. His instruments go for a song, because of the fact that those who need things of that

kind already have them and those who don't need them have no use for them. Statistics gathered by the Kentucky State Medical Society a few years ago, show that the average annual income of general practitioners for the state is from \$800 to \$1,000, but I feel sure this is certainly too low, however if it is approximately correct surely something is wrong somewhere. I maintain that our charges should be such for competent services that our income will be from three to five times these amounts, and still not keep us working all the time night and day. Of all men and professions we need as much as any, time to refresh ourselves to attend societies, to see the world as it is, to lend a hand in the molding of public opinion and to help in the general uplifting of our race. The man whose income is not over \$1,000.00 a year, is either not getting what his services are worth, or is too incompetent to deserve a place in our profession. For years back and up to the present time there has been a tendency for the surgeons to find fault with the general practitioner and criticize him for not sending him the surgical cases early enough for the best interest of the patient, and I am tempted to ask if it is not a fact that most of these late cases come from the under-paid general practitioner. Many times I have had men tell me that doctor Mattingly who is now dead, used to do their practice for \$2.50 where I charge them \$3.50 and that he did their practice for \$3.50 where I do it for \$5.00 and I have had them tell me the same thing about others who are still living. I meet these charges by telling them that I consider myself a better doctor than that, and that I don't understand how a doctor can work for such fees. I sometimes take time to explain to them that a horse and buggy out of the livery stable would cost \$1.50 to make such trips, and that my time ought surely be worth as much as a machinist's and that he charges 60 cents an hour and always charges extra for the livery bill. I have had fellows who live in the country attempt to engage me to do their obstetrical practice for \$10.00 without any charge for mileage and want me to make an extra trip gratis. Somebody has certainly been educating these people wrong. I have had insurance agents come to me and tell me that they wanted me to do some insurance examinations for them if I would do it for \$3.00 and when I told them our regular fee was \$5.00 for that work they would go away, and after-

wards they have told me that they succeeded in getting it done for what they had offered me.

I have come in contact with many people who seemed to have been trained to expect their doctor wait forever, or almost forever, for his pay, and who think a doctor is in "a mighty big hurry" if he insists on his pay within a year after the services are rendered. Now I most always give these people a little free instruction along this line and say to them that if every one should put me off this way that I would have been forced to quit practice, and gone into some other calling in order to make a living. In my opinion it is part of our business to educate our clientele up to the point that we are really both professional and business men, and not common laborers who are willing to work on short pay, and wait a long time for that. I frequently explain to them that when a person is sick he always should have and that he usually wants a competent doctor, but that in order to have such a one he must be well paid. That no man can do efficient work, whose income is not sufficient to allow him to live without worrying over his debts, or where his living is coming from.

A number of years ago an old farmer, and a good friend of mine, said to me "you are making more money and making it easier than any of us farmers," and my reply in substance was that I was perfectly willing to admit that I was making more money than some farmers that I knew of, but that I was working every day and many of the nights, whereas he never worked on Sundays, nor at nights, and always attended county courts, picnics, fairs and shows, and could leave his farm at most any time for a few days in the care of some one else without any material loss, while I had to stay with my business and could intrust it to no one. That if he died his wife could realize about as much out of his farm and stock as he could whereas if I died very little could be realized from what I had invested in education, books, instruments and office equipment, etc.

For a doctor not to have over \$1,000.00 annual income places him below that of the railway postal clerk, the rural route mail carrier and about on a level with a first class carpenter, clerk, or brakeman on the railroad with the doctor working or ready to work, all the time, never having any time he can call his own, whereas the other callings work only a given portion of their time.

I would state here that I hardly believe this average is true for the doctors of this vicinity, and that I hope never to see the time when such is the case. In my opinion it is part of our business to see that it does not.

The surgeon as a rule is a better business man than the general practitioner, some of them pushing their business even to the point of dividing fees, for referred cases, and some not even finding fault with him for not having referred cases earlier and not even expressing the opinion (to friends and relatives of course) that the case might have been managed in a more scientific manner. The surgeon's work is more spectacular, and appeals more to the laity's sense of business, and about the first question after inquiring regarding the seriousness of the operation is what will be the cost. This is approximately agreed upon and I am persuaded that these fees are paid willingly and promptly. It is part of the general practitioner's business to see that all cases that are strictly surgical, and which he is not prepared to handle in a strictly up-to-date manner, reaches the surgeon with as little delay as possible, and I may add with as little bias against the knife as is right. It is also our duty as well our business, to keep all cases which can be kept, from reaching the need of a surgeon, by proper treatment, and to keep all cases where an operation could do no possible good, from falling into the hands of the man who regards every thing as grist that comes to his mill. Surgeons pride themselves, and I will say justly on their low mortality in this day of anesthesia, asepsis and trained assistants, but it is not every one who leaves the operating table alive that is restored to good health, or that is even benefited. It is our business to be so informed about the ultimate results to be expected, that we can give the patient a fairly accurate forecast as to what to expect, that he or she may know how to decide intelligently whether it is desirable to undergo the risks of anesthesia and an operation, however small they may be, for the end to be attained.

It is our business when handed a lemon by the surgeon, to whom we have referred a case to protect ourselves by seeing that henceforth cases referred by us go elsewhere, on the principle that self-preservation is one of the first laws of nature.

Many people seem to think that we always have our calls come at the very time which suits our convenience most,

that they are always on good roads and good days, that our work is fascinating, clean and pleasant, that our cares and concerns for those under our treatment are not burdensome to us, that the pay is always good, our fees fat and juicy, our lives one gala day of pleasure and that we are living with out much effort on the fat of the land. It is our business to inform those who think thus and disabuse their minds of such erroneous ideas. It is our business not to be continually harping about our troubles, but to occasionally explain that there is possibly no calling so arduous (save that of the soldier in active campaign) as that of the active practitioner. His early life spent buried in his books, often with his mind filled with wonder as to how he is to make both ends meet. Days, weeks, months and sometimes years come and go while he sits in his office with chastened patience and anxious solicitude, for patients who seems slow to appreciate his ability. Then when business does come his way he is rushed hither and thither, early and late, hot and cold, rain or shine, facing dangers in the dark of the night, dangers from infection and contagion and in a thousand ways of which many people never think. Tired and worn from work day after day and night after night, often for weeks at a time he hardly knows what it is to get an undisturbed night's rest, frequently to administer to the suffering of some one who could and should have called the doctor the day before, or have waited until the next day. Frequently these calls are from some one who never pays doctor's bills and some times when he is sicker than those whom he leaves a warm bed at night to attend. It is our business to sometimes explain these things.

As we of the profession to day stand on the labors and sacrifices of those who have preceded us in the centuries that have passed, and are permitted to enjoy the fruits of their labors, it is our business to labor and to build, that those who come after us may find things better by the fact of our having existed.

Acute Perforating Ulcers of the Stomach and Duodenum.*

By R. L. Payne, Jr., M. D., F. A. C. S., Norfolk, Va.

In that the surgery of the stomach and duodenum is still a comparatively new

*Read before the 18th session of the Seaboard Medical Society, December, 1914.

field and the problems of diagnosis so numerous and confusing, together with the fact that the teachings and dictums of treatment are yet on such an unstable basis, I take this opportunity of reporting four recent successive cases of acute perforating ulcers around the pylorus, operated upon with recovery in every case.

Bearing in mind the wide divergence of opinion regarding the proper operative procedures in acute perforations, an additional apology might be offered, in that primary gastro-enterostomy was done in three of these cases.

The reports of the cases are as follows:

CASE NO. 1.—John D., aged 36; colored. Operation for acute perforating duodenal ulcer. Previous history, absolutely negative, denying all symptoms of indigestion, constipation, or constitutional disturbances. Present history: About four o'clock in the afternoon on September 20th, 1914, without any warning and while lifting a heavy piece of timber, was seized with acute pain in the epigastric region, which became so severe that he had to stop work and go home, walking a distance of a quarter-mile, and then sent for a doctor. While waiting for the doctor he vomited some food and later a large quantity of dark brown fluid. Twenty-four hours later he was sent to St. Vincent's Hospital with a diagnosis of appendicitis. Examination showed an abdomen which was generally tender, but with the tenderness decidedly more marked on the right side. The point-tenderness seemed greatest about midway between the position of the gall bladder and the appendix. Rigidity was general, also more marked on the right side and there was very little distention and liver dullness was not obliterated. The temperature was 99 and pulse was 112. Upon opening the abdomen over McBurney's point, free sero-purulent fluid appeared outside of the caecum as this part of the bowel was pulled up in an effort to locate the appendix. The bowel and appendix, however, appeared normal with the exception of a slight peritonitic congestion, and not until then did we realize that the lesion must be in the upper abdomen. Prolonging the incision upward we found a large collection of sero-purulent fluid under the liver, and after sponging this away, a typical small, punched-out perforation of the duodenum was found. Pouring through this opening was a bile stain fluid mixed with mucous. This opening was immediately closed with chromic cat-gut sutures, but on account of the friability of the tissues we were

afraid the sutures would not hold, and a Moynihan-Mayo closure of the pylorus was done. Sponges were then laid over this and the rest of the soiled area, our hands carefully washed in the hand-solutions and then a posterior, no-loop gastrojejunostomy done.

Drains were carefully placed around the site of the perforation and into the dependent liver pouch and the abdominal wound closed around them. Upon recovery from the anaesthetic the patient's shoulders were elevated as high as possible and plain warm water given by bowel for sixty hours. Liquids were allowed by mouth at the end of twelve hours, and at the end of the seventh day the patient was taking soft diet. Patient made a good recovery and the principal point to which I would call attention in the case is the similarity of the patient's condition to that of a ruptured appendix and the difficulty of accurate diagnosis before opening the abdomen.

CASE NO. 2.—J. W. B., male, white, aged 52. Admitted to St. Vincent's September 18, 1914, with diagnosis of ruptured gastric ulcer. Previous history: Patient had had vague intestinal symptoms, with constipation for about twelve months and in June, 1914, he underwent an operation for stasis in my hands, at which time a chronic appendix with many adhesions was removed, a Lane's kink was divided and a constricting pericolic membrane removed from the ascending and descending colon. The stomach at that time was carefully searched for ulcer, together with the duodenum and gall-bladder for diseased conditions. These were all negative and the patient made a nice recovery from the operation, obtaining a complete relief from all gastric and intestinal symptoms, together with a permanent relief from his constipation—until about the last of August—a period of two months and three weeks. At this time he began to have heart-burn and acid stomach, which recurred two or three different times during the last of August and first of September, the attacks lasting from one to two hours and usually coming on about one hour after eating a large meal. The present attack began on the 9th of September with pain in the epigastrium, coming on in the mid-afternoon, burning in character but not attended by cramps or nausea. This pain lasted about four hours and finally "wore itself out." On September 10th he had a similar pain in the afternoon, which he said was more akin to a true gastralgia, being relieved by vomiting. On the night of September

10th he had the same type of severe stomach ache following the ingestion of a large supper. He took a large purgative and had no further trouble until September 12th, when severe epigastric pain again developed and it was necessary to call in his family physician, who administered morphia. This pain was accompanied by vomiting and from the 12th until the afternoon of the 18th, when I first saw him, the pain continued and he did not take anything in his stomach except ice in small quantities. Examination shows a man of extremely sick appearance, skin pale and moist, pupils slightly dilated, temperature 97 and pulse 120. The abdomen was not distended but there was an exquisite tenderness and marked rigidity all over the upper abdomen above the umbilicus, the point of greatest tenderness corresponding to the position of the gall-bladder, and during the physical examination the patient was seized with a spell of expulsive vomiting and the material ejected consisted of a dark brown bloody fluid. Operation was immediately undertaken and upon opening the abdomen through a right-rectus incision a large quantity of purulent fluid, some gas and many large flakes of lymph welled up through the incision. The great omentum and transverse colon had been called out by nature and were walling back a large collection of inflammatory exudate between the pyloric end of the stomach and the liver. This was sponged out and upon removing several large flakes of lymph, a perforation, to the gastric side of the pylorus, was discovered. The opening was about the size of a split pea and coming from this was a fluid brownish-red in color. The opening was closed with sutures of chromic cat-gut and re-inforced with gastro-hepatic omentum; the soiled area was carefully cleansed out and note was made that the peritonitis was, so far, limited to the liver pouch and the right side of the abdomen below the liver. This area was carefully covered in with large gauze sponges, the hands of the operator and assistants cleansed in the hand-solutions, and a posterior-no-loop gastrojejunostomy quickly done. Drains were inserted and the abdominal incisions closed around them. The patient vomited only once and this upon recovery from the anaesthetic three hours later. Salt solution was given in the veins and under the skin and plain water continuously by rectum for a week. On account of the extreme condition of the patient before operation, his convalescence was slow, but he made a good recovery and has since

gained 36 pounds. He was in my office a few days ago and stated that he was absolutely free from any digestive disturbances and felt better than he had for over a year. The interesting features in this case are: First, the fact that this perforation had evidently lasted five days and nature had been able to protect the general cavity owing to the fact that the man had been quiet and had abstained from food during the entire period. Secondly, that the previous operation for stasis had not disclosed any visible signs of ulcer, and that the ulcer was either too small to recognize at the time of the first operation or was laid down as recent pathology at the appearance of his first symptoms the latter part of August.

CASE NO. 3.—J. S., age 36, male, white: Diagnosis, gallstones with acute cholecystitis or possible rupture of the gallbladder. Previous history: One month before present trouble, patient had suffered an attack of pain in the upper abdomen, which lasted about three days and was relieved by rest and morphia. For four weeks following this attack, the patient had absolutely no symptoms of indigestion or anything to indicate active trouble, when he was again seized with a dull pain in the epigastric region, which gradually grew worse over a period of twelve hours and finally became so severe that the family physician had to resort to morphia for its relief. Along with this pain the patient had repeated spells of vomiting and vomited some blood, but finally became relieved at the expiration of three days, when he was referred to me with a diagnosis of gastric ulcer.

Examination: Patient, a male, poorly nourished, with a normal temperature and a pulse of 104, was admitted to St. Vincent's Hospital on November 10th. The mucous membranes were pale and anæmic, the pulse was small and of low tension, and the patient had an anxious expression of pain and suffering on his face. The abdomen was perfectly flat, but very rigid over the entire upper half and there was extreme tenderness to the right of the median line over the gall-bladder area. There was a mass to be felt at this point, which moved slightly on deep respiration and there was a well developed general jaundice, together with a large amount of bile in the urine. A blood study showed a leukocyte count of 9,000, and the stools were normal in color, though the patient stated that they had been very light, almost white, for the previous three days. The case certainly appeared to be one of acute inflammation of

the gall-bladder with, most probably, obstruction of the common duct by stone. Operation: Upon opening the abdomen, the gall-bladder was very small and contracted and the fundus did not appear to show any evidences of inflammation. Tightly glued to the gall bladder was the duodenum, which proved to be in a highly inflammatory state, with a large bit of plastic lymph all over it, and the induration in the duodenum and the inflammatory exudate around the duodenum extended downward and completely covered in the cystic and common duct.

The exact pathology for a moment was puzzling, but upon careful dissection the condition proved to be an acute perforating ulcer of the duodenum into the gall-bladder just above the cystic duct. The upper corner of the great omentum had come to the patient's rescue and helped to cover-in and prevent leakage. Evidently there had been an adhesion between the duodenum and gall-bladder from a previous attack and this acute attack had resulted in perforation with such severe inflammation of the bile ducts as to produce jaundice. There were absolutely no stones to be felt in the gall-bladder or ducts, while on the other hand the inflammatory thickening and swelling around the duodenal ulcer extended well down around the papilla of Vater, which afforded an additional and sufficient explanation for the jaundice. The small gall-bladder with the perforating ulcer necessarily called for a cholecystectomy. The opening in the duodenum was closed up with chromic cat-gut and a Moynihan-Mayo closure of the pylorus was also done. This area was then covered with a gauze pad and a posterior no-loop gastrojejunostomy hurriedly performed. Drains were inserted at the point of the duodenal perforations and the abdomen closed. The patient made an absolutely uneventful recovery and is today free of all ulcer symptoms.

CASE NO. 4.—Miss Q., age 28. Was brought to St. Vincent's Hospital from a distant city, with a diagnosis of appendicitis. The previous history could not be elicited, in that the patient was too sick to give it herself and the family were not intelligent enough to supply the details. The present illness had existed three days. Physical examination disclosed a very tender abdomen with some distention, which was not marked, and a very high grade of rigidity over the right side, together with a feeling of mass from the ninth costal cartilage down to McBurney's point. Upon opening the abdomen,

a large amount of gas and dark-colored fluid escaped, which immediately told us that there was a perforation present. The appendix was sought for and found to be covered with lymph and congested, but there was no perforation present. The area of peritonitis seemed to be well walled off by the great omentum and the ascending colon, and upon prolonging the incision upward, the perforation was found to come from the pylorus.

The patient's condition was extremely bad, having a subnormal temperature and a pulse of 124 before operation. Taking this into consideration, together with the fact that the area was well walled off, we did not deem it wise to do anything but drain. Gauze packs were placed around the perforation and the whole area freely drained. Stimulation, together with transfusion, managed to tide the patient over the shock of the operation. The post-operative convalescence was very stormy for about a week, but the patient gradually began to mend and recovery occurred at the end of six weeks. There was a considerable bit of leakage for the first two days, but since everything was withheld from the stomach, this quickly stopped and we were finally able to return to the mouth feeding at the end of a week.

In that gastroenterostomy was not done upon this case, the question naturally arises as to the result of the ulcer after recovery from the acute rupture. There are many authorities who believe that acute perforation serves to cure an ulcer (providing the patient recovers) but there is a preponderance of evidence to show that many cases of acute perforations operated upon, with simple drainage, have to come to a second operation, generally gastroenterostomy, before they are relieved of their ulcer symptoms. In this particular case we have, unfortunately, been unable to trace the patient and therefore do not know the result.

To the average practitioner, the most instructive thing that these cases would indicate is the marked similarity between acute appendicitis and acute perforating ulcers of the stomach and duodenum. This similarity has only begun to be recognized in the last two or three years and it is a condition which would call forth the greatest amount of insight and diagnostic acumen in differentiating between the two conditions. It is, further, needless for me to emphasize the importance of making this differential diagnosis, in that the average case of appendicitis will often permit of three or four days of de-

lay, whereas acute perforations of the stomach or duodenum as a rule do not permit of any delay over 12 hours. In all of the statistics that I have been able to collect upon the subject of acute perforations of the stomach and duodenum, the operative mortality increases steadily after the first twelve hours, and it is needless to say that the condition is truly an operative one. Without operation, death will be the natural consequence in ninety-nine per cent. of the cases.

The series of four successive cases reported by me today is unique in that there was no fatality. I do not wish to create thereby the impression that I have not seen such cases die, with and without operation.

Finally, if I could bring to you one lesson which would be of some ultimate worth from a prophylactic point of view, it would be the great stress which I might place upon the importance of diagnosing ulcers of the stomach and duodenum long before the acute perforating stage is imminent. It is a fact that ulcers of the duodenum are often disposed to be latent and first announce themselves with acute perforation. These types are not the rule, however, but the exception and I find that my operative insight into the living pathology of the stomach and duodenum, together with careful, thorough and painstaking history in each and every case, has permitted me in recent years to make diagnoses of ulcer which I had been previously overlooking.

Therefore, if we would take more active interest in our cases of gastric indigestion and study more carefully the types which are particularly prone to hang on in spite of all the ordinary forms of treatment, I believe we would often make the diagnosis of ulcer, whereas on the other hand they first thrust themselves upon us with the symptoms of acute perforation. When in doubt, I feel safe in saying that exploration in these doubtful cases is far safer than the complications of ulcer, namely: hemorrhage, perforation and cancer.

Methods of Finding Early Cases of Tuberculosis.*

By B. L. Taliaferro, M. D., Catawba Sanatorium, Catawba, Va.

Put yourself for a moment in the position of the patient who has just been told that he has tuberculosis. Can you think just what it means, for instance, to the man with a wife and little ones, dependent

on his daily earnings? I ask you as the doctor in whose hands this man has put his case, earnestly to ponder what he suffers mentally, what his wife suffers, and then look out in the years that follow and perhaps see the wife break down and later one of the children with a hump back, one with hip joint disease, another dying with tuberculous meningitis. You have seen this, and perhaps worse. You have seen cases diagnosed as indigestion, grippe, bronchial trouble, weak lungs, run down condition, malaria, and even typhoid fever and later the correct diagnosis of tuberculosis when there was absolutely no hope for recovery. Who is to blame? Both the patient and the doctor. The former in delaying too long to consult the doctor, the latter in delaying too long in making the diagnosis. As physicians, are we not to blame for the patient's delay in consulting us? Should the public not be educated in the early signs of the disease?

Each year there is an increasing number of early diagnosis. The doctors are becoming more alert and realize more the importance of the early diagnosis. The public is gradually learning too the importance of early diagnosis and prompt treatment. Some of our earliest cases have been those in which some ex-patient or nurse has insisted upon the presence of the disease and persuaded the patient into being examined. In many of our cases, the suggestion of Sanatorium treatment has come from the patient or his friends.

The work of education must of necessity be gradual, but it must be continuous. There can be no let up. The State Anti-Tuberculosis Association has been recently reorganized, and it is to be hoped that each one of you will do what you can to further the work of this organization. It is hoped that there will be a large sale of Christmas seals this year as the Association depends very largely on this sale for its financial support. Will you not help by buying seals and persuading your patients to do the same?

How can we find the early cases? The State Board of Health has issued a catechism on tuberculosis which should be used in every school in the State. Children should be taught the signs of the disease and how to prevent it. They should be told that the putting of pencils, fingers, money and other objects into the mouth, swapping chewing gum, using a common cup, coughing and sneezing without guarding the mouth may spread any of the infectious diseases. They

*Read before recent meeting of Virginia State Medical Society, Washington, D. C.

should be told that boiled milk cannot give disease but raw milk can.

Dr. H. L. Barnes suggests that we advertise for the early cases in the newspapers and keep on advertising with sufficient frequency till the early symptoms are familiar to every one. He says, "the significance of blood spitting, pleurisy, chronic cough and night sweats should be just as well known to the public as the phrases, "His Master's Voice," "Soapine did it" or the picture of Dr. Blank who points his fingers at you from the newspaper columns and makes such positive statements that he can cure your ills." How can the State spend money to better advantage than to find the cases before they are incurable and before they have infected others. With one death in every seven, and, between the ages of twenty and thirty,—one death in every three, due to tuberculosis, why do we not put the matter squarely up to the Legislature and ask for sufficient money for an aggressive campaign and for Sanatoria for the far advanced case in white and colored? Why should the State not provide free beds for the poor? In a small way the kindly disposed people through the state are contributing small amounts to the Free Bed Fund of the Catawba Alumni Association, an organization of patients and ex-patients who are interested in spreading information about the prevention and treatment of tuberculosis. Through this fund they are able to help a few deserving patients who would otherwise be forced to leave the Sanatorium before being much benefited.

Every successful business man realizes the importance of advertising, the patent medicine men grew rich by means of it. Why should reputable associations and public institutions ignore the good that would result? Dr. Barnes suggests the following advertisement:

Read This. It May Save Your Life.

The object of this advertisement is to instruct people in the early symptoms of tuberculosis or consumption so that they will go to physicians before it is too late.

Suspicious Symptoms.

Cough or expectoration, even if only a little in the morning which you hardly notice, if continued over two months.

Frequent "bronchial," "grip" or fever attacks very suspicious, especially fever in the afternoon.

Blood spitting. If blood is coughed up the cause is tuberculosis nine times in ten.

Pleurisy. Caused by tuberculosis about seven times in ten.

Night Sweats. Very suspicious.

Loss of weight and strength very suspicious, especially if there is slight cough.

If any of these symptoms are present, no matter how well you look or feel, cut out this ad., take it to your physician and explain your case. **You can be cured** if you take it in time. **Hundreds** of patients who have been treated at the State Sanatorium at Wallum Lake are well today.

If this advertising campaign be conducted by the Board of Health I can see no legitimate objection to the plan. We all know the extent to which the public is fooled by the cleverly written Patent Medicine advertisements. Many intelligent people are misled by these false statements. The Journal of the American Medical Association has exposed most of the Fake Consumption Cures. It will pay any doctor to read this exposure and lay a copy on his office table for his patients to read. It can be had from the Journal of the American Medical Association, Chicago, Ill., for ten cents. Why not fight the devil with his own weapons and advertise in the newspapers and street cars letting the public know the early symptoms of tuberculosis and impress on them the fact that it is not cured by patent medicines or in fact by any drug.

Dr. H. M. Bracken in discussing Dr. Barnes' paper on "A Method of Finding Early Cases" said, "I want to suggest one way of finding them, namely, to look for them." He describes a survey that was made in one county in Minnesota in order to have a demonstration for the Legislature. "The investigator went into a county with a list of the deaths from Tuberculosis for the previous year for that county, and visited the families where these deaths had occurred, to find out if there were any cases of tuberculosis present. The people took to this work very kindly and sympathetically. Sometimes they asked, "What will you do if you find tuberculosis in our family?" The answer had to be, "Nothing." Some of them said, "If you can do nothing, then we would prefer rather not to know our condition, than to know there is a condition that should be treated, with no way of treating it." That was a pretty strong lesson to go to the Legislature with, and it had its effect. The Minnesota Legislature just adjourned passed a law providing for county Sanatoria, and the State Board of Health has promised to fill each one as soon as the building is completed,

because with a county survey such as that of which I have spoken, we can find plenty of cases."

Another means of finding early cases, is examination and inspection of employees. The Chicago Tuberculosis Institute for the past three years has conducted a successful campaign along this line and has enlisted many of the large corporations in this work with excellent results. By this means not only the health but the efficiency of the employees has been advanced. In 6,800 examinations in the past four years in Sears, Roebuck & Co.'s plant, there were found 193 cases of tuberculosis—nearly 3 per cent. of those examined. Forty cases of heart and kidney disease unknown to the patients were found, and 200 cases of communicable diseases other than tuberculosis. The good accomplished, the saving of life and money can not be estimated. I trust that the corporations in Virginia may see the wisdom and advantage of taking up this work. The large corporations who have their employees examined find that it pays. While writing this paper, an application has come in from a patient whose doctor says that he is certain that the man contracted the disease from careless consumptive fellow employees working near him in the ship yard at Newport News. A special bulletin on this subject can be obtained by writing the Chicago Tuberculosis Institute, 10 S. La Salle St., Chicago, Ill.

When a firm decides to take up this work, a conference is held between the superintendent and doctor and nurse, and it is agreed that the employees are to be watched for certain symptoms indicative of tuberculosis. A list of these symptoms is given in a card prepared for the guidance of superintendents' and foremen which is printed in full below:

Directions to Foreman or Others in Charge of Employees.

Tuberculosis is curable—If discovered early.

Please therefore watch for the following signs:

1st. Employees below weight, weak or anaemic.

2nd. Employees whose working power seems on the wane without apparent cause.

3rd. Employees from houses where death from tuberculosis occurred or where a case of tuberculosis exists, or employees who have been previously treated for tuberculosis.

4th. Employees who have the following symptoms:

(a) Gradual loss of weight and strength.

(b) Fever in the afternoon (even though slight).

(c) A lasting cough or cold.

(d) Loss of appetite.

5th. Hoarseness, continued or recurring.

6th. Night sweats.

7th. Spitting of blood.

8th. Tired all the time.

If the above were printed in large type and posted in conspicuous places in all factories or plants where large bodies of people worked it would undoubtedly do much good.

The Importance of Butter in Diet.

By Thos. R. Evans, M. D., Glenwood Park Sanitarium, Greensboro, N. C.

In a late communication to The Charlotte Medical Journal the statement was made that from a dietetic standpoint oleomargarine was much more valuable than butter. The reason for this is that it contains fats in addition to "butter fat," other fats.

Butter is one of the most valuable articles of foods, especially along the Atlantic coast, which is subject to sudden and low change of temperature. Its heat production is high, and according to a theory, as it supplies a comparatively large amount of the oxide of lime, next to cheese, it is chemically a necessary article.

The supposed importance of lime is so great that many German bakers have been adding it to dough.

For obvious reasons the vast majority of the people in the United States do not eat creamery butter.

The name adulterated butter should prevent its consumption, also the names Process or Renovated should be a caution, for renovation suggests the "doing over" of old feather beds.

Such so-called butters cannot be considered healthful from their nature, and they must be subject to deterioration when kept in the average house.

Oils and fats are absolutely necessary to good health, and it is largely the lack of these which cause the large use of aperient and purgative expedients.

The best oleomargarine, the oil from ham and the larger consumption of good cheese should be encouraged.

Treatment of Gas Bacillus Infection.—Delorme, (*Presse Medicale*) expresses the view that too much stress is commonly laid on free incisions or amputation as the measures indicated in dealing with gas bacillus infection; success may be had with other, simpler means. The treatment strongly advised by Delorme consists of injections of hydrogen dioxide solution. A circular barrier to the extension of the gas organism should be established by introducing successive amounts of the undiluted solution subcutaneously in a ring above the tense, brown, emphysematous tissues already infected. The space between injections should be about one to 1.5 cm., and after the first ring, a second circle of injections should be made a few cm. above, the individual points of injection in the second circle alternating with those in the first. Where the thigh is being dealt with, thirty to sixty injections may thus be made. Additional series of injections may be made above or below the initial circles on the next day or the same day, if necessary. The aim should be kept in mind to reclaim permanently by means of the solution tissues from which the gaseous process has receded. In hospitals, injection of oxygen gas, replacing the septic by an antiseptic emphysema of the tissues, may be substituted for the hydrogen dioxide, but the greater simplicity and availability of the latter commends it for general use.

Where tension of the tissues over the infected area is excessive, the injection treatment is not in itself sufficient, as vascular compression results from the excessive pressure, with superelevation of pressure gangrene in addition to the septic gangrene already existing. To overcome this difficulty, the fasciae covering the muscles must be split upon, as they constitute an essential factor in the rise of pressure, forming an unyielding wall over the gases within. Thus in the leg the fasciae covering the anterior and the posterior groups of muscles should each be split over a distance of ten or more cm., and the superficial muscles separated from the deep. This procedure must be carried out early, as irretrievable damage quickly follows the progress of the bacterial process, if unopposed. The large openings made into the fascial compartments should be used for free irrigations with hydrogen dioxide solution. One of the openings should by all means be made along the course of the large vessels of the part nearly to the margin of the gangrenous area, in

order to cut off and septic infiltration which might follow in the cellular tissue and lymphatics accompanying these vessels. Early disinfection of all deep wounds with hydrogen dioxide is urged as the chief prophylactic factor in relation to gas bacillus infection.

The Treatment of Diphtheria.—Martyn, in *The London Practitioner*, recalls the fact that it has been stated by some authorities, and it is believed by many medical men at the present time, that liberal doses of antitoxin are responsible for many of the bad after-effects or sequelae of the disease, such as paralyses, neuritis, etc. This has not been the writer's experience; any temporary ill effects, such as rashes, joint-pains, etc., are not influenced by the size of the dose, for a small dose may act just as severely as a large.

Giving bicarbonate of soda in severe cases serves two purposes. In all bad cases of diphtheria, especially when the tonsils and fauces are involved there seems to be a pronounced interference with fat metabolism in the liver, resulting in the appearance of diacetic acid and acetone, especially the latter, in the urine, which in consequence has a much enhanced acid value. At the same time there is a marked accumulation of fat in all the organs, particularly in the heart, liver, and kidneys. Ample proof of this has been found in every post-mortem examination conducted on bodies of children dying during the acute stages of the illness. To this change, which is progressive, the vomiting, the irregularity of the heart and its failure are probably due. The administration of bicarbonate of soda, subcutaneously, by mouth, or by rectum, has certainly proved of great benefit in many of these cases, and in nearly all it has reduced the vomiting considerably. Further, it is grateful to the patient as a drink, and it helps to clean the tongue and throat.

Adrenalin chloride is not given to raise the blood-pressure, but to keep it from falling. It is therefore given in small doses of constant strength at regular intervals from the very beginning of a case, and its administration is persevered with until the circulatory system has recovered its tone. It is a grave error to give adrenalin chloride or any other substance with a like action toward the end of a case or in large doses at occasional times only. To do this is simply to add to the load to be overcome by an already failing heart, and to run the risk of bringing the whole machinery to a sudden stop.

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**EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.**

THE SEVENTEENTH ANNUAL SESSION OF THE TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA,

The seventeenth annual session of the Tri-State Medical Association of the Carolinas and Virginia was held in Charleston, S. C. under the Prehidency of Dr. Edward C. Register, Charlotte, N. C., February 17-18, 1915, at the famous old Charleston Hotel, the scene of many notable events in the history of South Carolina.

While the courteous Secretary, Dr. Rolfe E. Hughes, Laurens, S. C., with the alert cooperation of other members of the Association, had been active in securing an ample program, and a goodly attendance was expected, the number of members registered as present at the meeting in Charleston, was in excess of 1914, and in excess of any previous session of the Association held in this state which has ordinarily furnished a smaller attendance at its meetings than has either the states of North Carolina or Virginia when the meetings were held on their territory.

Not only numerically strong did the session make a fine showing, but the grade of papers presented, and the keen, incisive, discussions coming on rapidly after the reading of a paper, were of the usual high order and denoted the meeting one of the best in the history of the Tri-State. The men who do things, who give character to the profession in the three states, the leaders, were there, and to say the meeting was a splendid success in every way, and from every viewpoint, only partially expresses the positive enthusiasm manifested all along during the two days of active earnest work.

Seventy-two papers were programmed, and of this number more than forty-five were actually read. The initial address by the President, presented in his characteristically dignified deliberate manner, and read in a quiet, but impressive tone, was pronounced an address of more than passing interest, and was appreciated as a timely dissertation on the value of medical societies, and a strong and vitalizing plea for the harmonious

confluence of professional ideation and effort.

Following the address of the president, a program of more than usual interest was presented, and the sessions were called on time, and held until very late hours thus enabling the accomplishment of a large amount of work. Fifty new members were added on the last day, and the following officers elected:

President—Dr. James H. McIntosh, Columbia, S. C.

Vice-President—Dr. Carl V. Reynolds, Asheville, N. C.

Vice-President—Dr. Beverly R. Tucker, Richmond, Va.

Vice-President—Dr. G. Augustus Neuffer, Abbeville, S. C.

Secretary-Treasurer—Dr. Rolfe E. Hughes, Laurens, S. C.

Councillors;

Dr. James K. Cross, Newport News, Va.

Dr. Edward C. Register, Charlotte, N. C.

Dr. Wm. B. Way, Ridgeville, S. C.

The session of 1916 was voted to be held in Richmond, Va.

J. H. W.

TRI-STATE SESSION NOTES.

More than 100 registered at the opening session of the first day.

The President was at his best, grave and dignified, alert to recognize, ready to decide, and always keenly alive to the big program and the desire of gentlemen who had prepared papers to present them, he pushed business in a quiet positive way that contributed much to the success of the occasion, and the completion of a lengthy program.

Mayor John P. Grace most gracefully did the honors of the welcome address, portraying the glories of the past and predictions for the future of dear delightful Old Charleston, and with just enough eulogy of the medical profession; it might truly be said, His Honor, is a success on such occasions.

Gentle, Modest ever, even as becometh traditional woman, Dr. Arch. E. Baker, our honored Ex-President, presided at the opening session with his accustomed suavity and delicacy of manner so endearing to his many admirers.

Rev. Wm. Way, Rector Grace Church Charleston, who rendered the opening invocation, is kindly remembered as having performed the similar service at

the Charleston Tri-State meeting six years previous. As a well known Virginia doctor present, and churchman by the way too, remarked, "Rev. Way invokes well, and has the saving grace also of knowing when to stop."

President Register's address brought to mind forcefully the purposes for which the Tri-State Medical Association came into existence, and left his auditors profoundly impressed with the fact that the organization has served, and is serving a useful purpose to the profession of the three states as well as affording its membership a pleasant outing a few weeks after the holidays, and at a time when no other society meetings conflict. The "confluence of ideas" thought in the address was a happy one, and like everything else was appreciatively received. The applause greeting him alike at the beginning and the end of his address was of more than ordinary significance, and there was a strong undercurrent of kindly personal sentiment noticeable.

Secretary-Treasurer Dr. R. E. Hughes, Laurens, S. C., was keenly alive to his important duties, and kept both ends of his work running smoothly during the two days. Gentle, kindly mannered, he creates few frictions, and makes friends both for himself and the Tri-State.

Of the fifteen past presidents of the Association, Drs. W. H. H. Cobb, W. L. Robinson, and J. A. Burroughs have passed into eternal rest; while of the remaining twelve, six were present at the Charleston meeting, and three of the others sent written regrets on account of either personal illness or that of some of their families. A splendid loyal set of men are those the Tri-State has ennobled with its highest honor; men appreciative of the honors received, willing and anxiously as attested by their continued presence and active participation from year to year in the scientific, and other affairs of the Association, to render service where distinctions have been accorded.

Dr. Southgate Leigh, Norfolk's distinguished surgeon, and an active member of the Executive Council, President last year, was also on the program for a paper, and as ever mindful of the interests of the Association.

Richmond's eminent surgeon whom all medical societies have ever manifested a keen desire to name for President whenever occasion offered, Dr. Stuart Mc-

Guire, presented the first paper after the President's Address, entitled, "Surgery of the Oesophagus; With Report of Cases." Like all of Dr. McGuire's papers, it was listened to with rapt interest, and provoked helpful discussion.

The Chevalier Bayard of the Tri-State, Dr. Jno. W. Dillard, Lynchburg, Va., presented a paper of instructive interest to all, and added to the pleasures of those fortunate to engage him in social conversation.

Of much general interest was the "Moving Picture Illustrations of Nervous and Mental Diseases" shown on the curtain, with explanatory lecture, by invited guest, Dr. T. H. Weisenburg, Philadelphia, Pa. To many of the members it was their first opportunity of seeing the "movies" used to graphically portray the varying manifestations of nervous disorder. The pictures were very satisfactory, true to life, and the accompanying lecture full of instruction.

Dr. Robert A. Taft, Charleston, S. C., presented a series of X-ray plates that demonstrated alike his familiarity with this special line of work, and also the constantly increasing accuracy and perfection of detail possible with careful expert ray work.

Dr. A. G. Brenizer, Charlotte, N. C., presented a series of "Goitre-Lantern Slides," with accompanying lecture that closely held the attention of his auditors, and demonstrated himself one of the strong younger men of the body.

The mountain section of North Carolina, world-famed as a resort for the relief and cure of tuberculosis, was well represented by papers from some of that section's best workers in tuberculosis. By common consent, in most medical society meetings nowadays, when a Western North Carolina man begins to talk "tuberculosis," people sit up and take notice, believing the members of the profession in the mountains of Western North Carolina who are doing special work in this disease, know as much about it as any medical men do, in any portion of the earth, and practice in a climate especially favorable to the arrest of tuberculosis in its protean manifestations.

Dr. Tom Williams, Washington, D. C., the man whom nobody has ever yet accused of not being willing to discuss any subject, and do it well too, in any medical society, at any time or place, was as usual

in his seat, ready, able, and willing to clarify any obfuscated spot appearing on the horizon. A pleasant affable gentleman, his presence always adds to any gathering of medical men, and the extensive range of his scientific store of knowledge is an ever source of both pleasure and surprise to his friends.

The scholarly Dr. W. T. Carstarphan, Wake Forest, N. C., presented a paper on "Liver Function with Reference to Metabolism," that made men who have not been studying physiology recently think seriously of how far we may be advancing in scientific knowledge these latter days.

The trip, briefly made one afternoon to the Navy Yard was productive of both pleasure and profit. Activity is seen on every hand keeping Uncle Sam's naval equipment in fighting shape. Lying quietly too, in the big dry dock was seen one of Admiral Dewey's ships that fought at Manila Bay in 1898, now being transformed into a carrier of ammunition for a torpedo boat.

The informal reception at Dr. Baker's beautiful sanatorium afforded a pleasing opportunity to inspect this beautiful and commodious private hospital besides refreshing the inner man. The sea breeze at the yard, and the return ride, had sharpened appetites, so there was none failing to do ample justice to the welcome provision for hungry doctors. The institution was much admired, presenting evidence on every hand of careful construction, ideal appointment, and skilled management; to see it was to commend it. The graciousness of the Sanatorium nurses gave rise to the thought that at least one of the bachelor Aesculapians may wander there again.

The Response on behalf of the Tri-State to Mayor Grace's pleasing words of welcome come with peculiar grace from the Vice-President from Virginia, Dr. J. Allison Hodges of Richmond, but formerly of North Carolina. Dr. Hodges, while modestly disclaiming and thought or suggestion of priority over either of the two great leaders of the profession oftentimes mentioned as having originally brought about the institution of the Tri-State Medical Association, had only a few years prior removed to Richmond, Va. from North Carolina, and his heart, like that of all true "tar heels", yearned for contact with his old fellows, and his influence was a potent one in effecting the organization, unquestionably the greatest

possibly of that of any of the younger men participating in the organization. Hence as Vice-President it was fitting that he voice our response to the Mayor's words of welcome, and to say he "did himself proud," but feebly suggests the inspiring vigor of his choice diction, or recalls to the mind of those present the rounds of applause greeting his perfectly rounded periods, or his well timed oratorical deliveries, Dr. J. Allison Hodges, easily one of the South's most famous neurologists, is equally one of its strongest and most forceful speaker.

The suggestion sometimes heard that when you attend medical societies of grade above the average state society, the surgeons are very prone to usurp the space and time with their papers and discussions, was disproved at this meeting. Surgery, practice, the specialties, all were represented, and ably so by essayists, all blended into a pleasing instructive program that was good for surgeons, generalists, public health workers, specialists and all—In short it was a fine meeting, Doctor, and everybody went away delighted with the Tri-State and with the Charleston meeting too.

An enterprising photographer attempted the impossible in endeavoring to corral the Tri-State members and secure a group picture of those attending the session. Chosing the hour immediately after dinner on Wednesday, he succeeded in lining up a portion of the best looking (?) of the membership, but it was to be regretted that he was unable to get more together at one time for the photo.

It does not often happen that a society elects an absent member president, as was the case when Dr. James McIntosh of Columbia was thus honored by the Tri-State meeting. In Norfolk, Va., in 1907, the A. M. A. was in session the same date, and Dr. Stuart McGuire attending its sessions, when the Tri-State elected him President. It was recalled at Charleston that three years previously in Columbia when introducing Dr. McIntosh as Vice-President, the then president humorously stated that "the Tri-Staters liked him, and in the course of time, there was no telling what might be done to him, or with him." His selection gave general satisfaction, and was appropriate and well timed. A recent president of his home state medical society, the Tri-State in honoring him, merely expresses its cordial approval of what his own people regarded as a fitting distinction.

The extensive use of X-ray pictures illustrating the papers presented in medical society in modern days was strikingly demonstrated when more than thirty per cent. of the papers presented were illustrated with either X-ray or moving pictures.

Dr. C. B. McNairy, the Superintendent of the N. C. Training School for the Feeble-minded at Kinston, N. C. read a strong and appealing paper advocating state care for these unfortunates and urging the establishment of similar institutions in all the states.

Dr. Hugh J. Young, Baltimore, was a welcome visitor and with his illustrated lecture on the "Development of the Urological Clinic" gave interest to the session. In the discussion following, it was manifest that Drs. A. J. Crowell of Charlotte and Julius Taylor of Columbia and others were actively working along similar lines and clinically duplicating the results attained by the splendid development on these lines at the great institution in which Dr. Young is working.

Dr. G. C. Savage, Nashville, Tenn. was another guest who with his valuable essay on the "Nervous Mechanism of the Eyes" afforded instruction on a subject in which the doctor is recognized as a masterbuilder.

Dr. Carl Reynolds' paper advocating a change in the methods of tabulating vital statistics that would refer the death to the place of residence, rather than the place at which the death actually took place, would if it were put in practical operation tend to make more manifest than at present the actual morbidity of certain sections as regards the liability of their permanent residents to die with certain diseases, but it would entail a vast addition to the clerical labor involved in statistical compilation, and for this reason, (while just and equitable beyond question,) is doubtful of acceptance by the various vital statistical departments. The principle is correct, and should be contended for whether accepted at this time or not.

Dr. J. Madison Taylor, Philadelphia, Pa. gave food for constructive thought in his disquisition on "Physio-Dynamic Remedies in Everyday Practice," and was a guest who will be welcomed again.

Dr. Joseph A. White, Richmond, Va., who continues one of the most active of the middleaged of Southern oculists and

justly regarded as having done pioneer work in firmly establishing his specialty, was present, respected as an Ex-President of the Association, loyal to the cause, and a source of pleasure and inspiration to men who believe in high standards in medicine.

It had been suggested the "low price of cotton," plus the "war in Europe," might diminish the number of accessions to membership, but such was not the case. Exactly fifty new members were admitted, quite a number of them being present, and many of the choicest of the younger professional element from the three states.

Richmond, Va. and Lynchburg, Va. ran a very close contest for 1916 place of meeting, Richmond winning over Chevalier Dillard's town by a single vote in the Ex. C'l meeting it is said. When the lavish hospitality with which Richmond entertains visiting medical societies is remembered, the big vote Lynchburg receive was most flattering, for the doctors certainly do enjoy going to Richmond.

Dr. Chas. O'H. Laughinghouse, Greenville, N. C., when, in response to a call near the close of the session, for a word from the new members, made a most pleasing short speech, endearing himself to those who know and appreciate him, and impressing himself upon all as a man of much force and character.

Speaking of men being appreciated, if there is one particular man in the Tri-State who most sincerely loves the organization, and has its success and advancement very close to his heart, it is the old standby, the reliable steady puller, in the person of Dr. R. B. Epting, Greenwood, S. C., Joining the Tri-State shortly after its organization, his presence, his kindly concern, and active zealous interest, have been manifest at every meeting since. As a member of the Ex. C'l his advice has been most valuable, and his judgment and decision only equaled by his modesty and loveableness of disposition.

The new building of the old Medical College of South Carolina, only recently completed and opened for use during the present school term, presents the appearance of being well built, and immensely far in advance of the old building used for so many years, and from whose halls went some of the South's best doctors. A visit to the dissecting hall in the evening

elicited expressions of approval from the guests at the improved aescpsis, and the more delicate and complete dissections being done, coupled with the markedly better state of preservation of the cadavers, than were noticeable in anatomy rooms a quarter century since. The instructor in this part of the college work is an enthusiast, and one who had examined a few hundred doctors in anatomy, wondered if it could be possible for an average student to spend two years in contact with so enthusiastic an instructor without becoming very familiar with the intricate details of human anatomy. Incidentally, en passant, it was suggested, that with the handsome new college building, the new Roper Hospital, and the installation of more whole-time teachers, coupled with the growing spirit of modern medicine seen in other quarters of the city, the Council on Education of the A. M. A., would more than likely at their next rating of American medical schools, advance this institution from Class B. to Class A. And why not? Assuredly some of the nation's finest medical men have both occupied the seats as students, and the rostrum as teachers of this venerable institution of medical learning, in the days of the past. I called the attention of a student in the anatomy hall to the fact that one of the former teachers of the college, Dr. Robt. A. Kinloch, in 1862, deliberately opened the abdomen of a Confederate soldier, sutured the intestines for a gunshot wound, and the patient recovered. But the operation, save for the occasional student who saw the account hidden carefully away in the pages of the big *Medical and Surgical History of the War of the Rebellion*, went unnoticed until twenty-one years later a Swiss surgeon, and a few months still later, a New York surgeon did the same thing with equally good results, since which time—well, "everybody's doing it" since then, and no man dares suffer an abdominal gunshot wounded patient to die without section and suture.

J. H. W.

THE BAKER SANATORIUM OF CHARLESTON, S. C.

During the recent interesting session of the Tri-State Medical Association of the Carolinas and Virginia, in Charleston, S. C., it was the pleasure of the writer, in common with the other members attending the meetings of the Association, to be informally received one evening at the private hospital of Dr. Archibald E. Baker, known to the public and profession as the Baker Sanatorium. The situation

on the water front is one of the most beautiful of many in this delightfully quaint and most attractive of old cities. The construction of the building and its internal appointments are ideal, embodying as they do, the harmonious blending of the best in modern scientific hospital construction, with the pleasing features that charm the eye and delight the soul of cultured mankind with refined convenience and elegant comfort. With choicest equipment, inviting environs, a corps of intelligent and well trained assistants deeply imbued with his own admirable esprit de corps, himself one of the South's accomplished and skilled surgeons, Dr. Baker, just entering the prime of vigorous and capable professional manhood, has lying before him one of the most fertile fields of human endeavor. To his friends, those of the profession who know him best, and to a singularly devoted clientele, he gives ample evidence of being fully equal to the great responsibilities and vast opportunities awaiting him, to write high his name on the roll of those who have added much to the comfort and relief of their fellows from avoidable suffering and premature loss of life, besides attaining that degree of honor merited by every successful surgeon of the South who boldly leads the way in making in our own home cities, private hospitals with equipment and skill equal to that found in the great medical centers of the East. Success to Dr. Archibald E. Baker, and his worthy associates. J. H. W.

THE HUMAN BODY; MOLECULES, CELLS.

As before pointed out these atoms have attractions or affinities—some stronger, others weaker—which draw them together in pairs or groups to form molecules. Some of these molecules, as the inorganic ones are made up of two or a few atoms, but the others, the ones that go to make up living tissues, contain many atoms and may be very complex. The molecules form the cells and tissues which are the building stones or raw materials out of which our bodies are formed. Each cell is surrounded by a membrane through which it imbibes nutriment and throws off waste materials and poisons generated by its activity. Some cells are unstable and after reaching a certain size divide in two parts and form what are called daughter cells; these remain stable for a time but as they grow larger they too subdivide and so the process goes on. Other cells are stable or permanent, however, and if destroyed after the maturity of the indi-

vidual—cannot be replaced and are lost forever. The life history of the cells is very clearly outlined by Benjamin Moore M. A., D. Sc., F. R. S., Prof. of Bio-Chemistry, University of Liverpool, as follows:—"Incidentally it may be pointed out that it is this varying stability which determines the cycle of life of the individual. There is a popular fallacy in lay minds that the whole human body is replaced by fresh material in a period which by some whimsical fancy has been fixed at seven years. As a matter of fact some cells are formed, pass to maturity, and perish almost daily, while others last as long as the animal itself. Many of these latter cells form the master cells of the body, of vital importance, and their decay determines the downfall of the whole vast community. Such cells are to be found in the brain and other parts of the central nervous system, in arterial walls, and in mechanisms which control the heart. As age advances the work of these, and other cells, alters, and chemical products are thrown out and accumulate which sow the seeds of decay. Decline and death are accordingly part of a normal process just as much as birth and growth are at the early parts of the course of life, and, so far as our present knowledge leads us, all we can hope for is by watchful care to prevent earlier decay by seeing to it that these delicate mechanisms are not clogged and poisoned by effete products of a poisonous nature manufactured by wrongful habits of life, either in the body itself, or added from without by unsuitable nutrition, or the invasions of disease.

Even this much would be a great triumph, for it lies within our power as a race practically to abolish infectious diseases and wrongful habits, which are responsible for half the deaths and four-fifths the disease and suffering, which afflict humanity. After all, it is the happiness of health during an allotted span rather than mere length of days that is the greatest gain. The suffering entailed by disease during life is a real evil compared with which death at a ripe old age is only a chimerical misapprehension." (Origin and Nature of Life, pp. 44-46.).

We thus see the exceedingly great importance of preserving the structural integrity of the cells and keeping them in a state of healthy functional activity; and can readily understand why the use of alcoholic liquors, narcotic poisons, overeating and other bad habits cause injuries that it may be impossible to repair.

CONCERNING THE PATHOLOGY OF CUTANEOUS CANCER.

Cancers of the skin are usually divided into three classes, one class where there is simple ulceration, the second class where there is a fungous growth, and the third class where deep ulceration exists. From both a clinical and pathological standpoint such a classification is absolutely wrong. The work of Krompecher in Germany and of Bloodgood in America, to mention only a few of the workers, has conclusively shown that cancer may originate not only from the different cutaneous structures but also from the different layers of these structures, and that these different types of cancer run totally different courses.

Springing from the prickle or Squamous cells of either the skin or the mucous membranes we may encounter either ulcerative or fungous cancers. Upon examining stained sections we find that the cells are large and stain well with the acid dyes, and that they tend to form whirls or "pearls." These tumors nearly always give rise to metastases.

Arising from the basal cells comes a totally different kind of neo-plasm, a type that may either give a superficial ulcer or a fungous mass. Under the microscope these cells are seen to be small and to stain intensely with the basal stains. They never form whirls. Most important is the fact that tumors of this kind never metastasize, no matter how long they may last. Another important fact is that such tumors may have multiple points of origin, thus necessitating wide removal.

Cancers arising from the hair follicles are usually of the basal celled type. After a growth has gone on for some little time it may be impossible to say whence it arose, although its basal celled character can still be determined.

The sebaceous glands occasionally give rise to cancer, a cancer that is apt to grow rapidly and give speedy metastases. As the sebaceous cells speedily lose their characteristics it may be impossible to identify members of this group.

From the sweat glands cancers arise rather infrequently. Not much is known concerning the ability of these tumors to form metastases, but judging from analogy they should be able to do so rather speedily.

The sweat ducts give rise to benign tumors; cancer from them has not been described, but doubtless occurs.

Cancer springing from aberrant epithelial structures is best exemplified by

the group of naevo-carcinomata, arising from naevi and pigmented moles. These growths are commonly called melanotic sarcomata, but some of them have been shown to be true carcinomata, and the true nature of the remainder is still under discussion. These tumors are notable for the great speed with which widespread dissemination takes place, this often occurring as soon as change is noted in the original growth. In this group metastasis takes place partly by the blood vessels and partly by the lymphatics.

WHAT IS A GARDEN.

What would a good garden mean to your family?

To the young it means a school of employment, of industry, of perseverance, order, trade, finance; physical and mental development, independence in thought and action.

It teaches a child to become a man in thought and action, while he is becoming a man in stature, so that when he becomes a man in years, he will be self supporting.

Give a child a few square yards of garden, encourage it to cultivate it, market the product, and invest the proceeds.

Even the father will be surprised at the son's bank account of from \$30.00 to \$75.00 all from thirty feet square, in a single year.

To the house wife, it means table variety, fresh goods, less work, time saved, good nature.

To the bread winner, it means clean premises, more and better to eat, less grocery bills, bigger bank accounts, more money for church and charity, more and better clothes for the family, prosperity, not adversity.

To Grand-mother, it means more sunshine, more fresh air, a good appetite, smiles not frowns, more Xmas presents for the grand children, and a bouquet of fresh flowers in every room.

To Grand-father, it means employment, regular exercise, regular habits, good appetite, good digestion, contentment, and long life.

To all, it means flowers instead of flies, vegetables instead of rats, berries instead of weeds, luxury not poverty, bank accounts not grocery bills. Compliments from admiring neighbors on the beauty of your garden, not a notice from The City Board of Public Health to Clean Up.

Which will you have.?

Editorial News Items.

Dr. Clarence N. Peeler, formerly of the faculty of the North Carolina Medical College, has returned to Charlotte, N. C., after spending several months in post-graduate work in the East and will devote his entire attention to diseases of the eye, ear, nose, and throat.

The contract has been let for the erection of the new hospital at Hamlet, N. C., which it is stated will cost \$20,000.00 and be supervised by Drs. Royster and Moncure of Raleigh, N. C.

Drs. W. L. Rodman, Philadelphia, Pa., and **W. S. Thayer**, Baltimore, Md., have accepted invitations to attend the meeting and deliver addresses at the forthcoming session of the South Carolina State Medical Association to be held in Greenwood, S. C., in April. **Dr. Edward F. Parker**, Charleston, S. C., is President, and **Dr. Edgar A. Hines**, Seneca, S. C., Secretary-Editor.

Dr. J. S. Moffatt, Due West S. C., is reported improving in health and will shortly resume his professional labors.

Died at his residence in St. Louis, Mo., on January 30, 1915, **Dr. Horace M. Julian** who had been for some years a successful practitioner of the city, though originally a native of Lexington, N. C. **Dr. Julian** was born December 10, 1861, and after a boyhood spent in his native place, was graduated from the University of Maryland with the degree of M. D. in 1885. He practiced only a short while in North Carolina, and a few years in South Carolina, after which he removed to St. Louis, Mo., where he achieved success. He was the son of **Rev. W. A. Julian**, a well known clergyman who lived and died at Melrose, Fla., two years since at the ripened age of 83.

Dr. Julian was stricken with paralysis five years prior to his death, but regained partial health for a time, but for 18 months previous to his end, he was in feeble health. He is survived by his wife, two sisters and two brothers. The sisters are **Mrs. J. K. Efford**, Gilbert, S. C., and **Mrs. S. C. Ballentine**, Leesville, S. C. His two brothers are also physicians of deserved eminence in the profession, **Dr. A. J. T. Julian** of Lake City, Fla., and **Chas. Adrian Julian**, of Thomasville, N. C.

Dr. Rufus Franklin Smith, a retired physician and president of the Easley Loan and Trust Co., of Easley, S. C., died at his home in that city of pneumonia, on February 5, 1915. Dr. Smith was 57 years of age, and after twenty-nine years experience as a physician had engaged in the banking business, and at the time of his death was regarded as one of the most active citizens of the business community where he resided. Well educated, a medical graduate of the University of Va., post-graduate student of the best institutions of New York and Philadelphia, a gentleman of untiring energy and wonderful resourcefulness, Dr. Smith was a successful practitioner from the start of his busy career. He read widely upon various subjects, and was a most successful and scientific farmer, finding time to be an elder in the Presbyterian church, a director in various financial enterprises, his was a well ordered, busy active life that left an impress wherever it touched that of his fellows.

Dr. Geo. W. Shipp Newton, N. C., has been elected county physician for Catawba County, succeeding Dr. H. E. Rowe who has just completed a service of four years.

Dr. Robt. H. Rowe, Bessemer City, N. C., has gone to Philadelphia, Pa., where he expects to remain a year or two taking special post-graduate work.

Dr. C. M. Van Poole, Salisbury, N. C., Ex-President N. C. State Medical Society, has been seriously ill at his home for several weeks past with ptomaine poisoning and its sequelae, but is reported convalescent to the gratification of many friends and patients.

Many North Carolina friends of Dr. W. W. McKenzie, Salisbury, N. C., late member State Board of Medical Examiners, learn with pleasure of his marriage in New Orleans, La., on February 1st, 1915, to Miss Florence Robinson, of that city. After a few weeks in New York City, Dr. McKenzie and bride, will be at home at Salisbury, N. C., March 1st, 1915.

Dr. P. A. Herring, Baltimore, Md., Secretary Maryland State Lunacy Commission, who was appointed by Governor Manning of South Carolina shortly after his inauguration in January to make a critical survey of the State Hospital for the Insane at Columbia, S. C., has filed his report with the Governor and has re-

turned to Baltimore. Dr. Herring appears to have done his work carefully and thoroughly after the manner of the expert he is credited with being, and as a result of his studies recommends an expenditure by the state of South Carolina of \$500,000.00 in betterments to the institution. It is believed the present administration will take measures to secure the improvements advised by Dr. Herring within a reasonable time. In this connection it will be of interest to the many friends of that estimable Carolina gentleman and thoughtful student of mental alienation and distinguished authority on pellagra, Dr. J. W. Babcock of Columbia, S. C., to recall the improvements advised by the eminent expert from Maryland, are substantially just the changes so urgently advised, from time to time, by Dr. Babcock, while at the head of the South Carolina State Hospital for the Insane.

Advance reports from the vital statistics department of the North Carolina State Board of Health indicate there were in the state in 1914, 71,931 births registered in North Carolina, while the deaths reported in the state during the same year were only 31,484, showing an increase of over 40,000 population during the year. The death rate for whites was 11.5 per thousand; for colored the death rate was 16.6 per thousand. The white birth rate was 36.2 per thousand, and the colored birth rate per thousand, was 250.

The annual ball of the Medical College of South Carolina at Charleston, S. C., on February 5th was one of the notable social features of the season. Gov. Richard L. Manning and Drs. Robt. Wilson Jr., Arch. E. Baker, R. T. Cathcart, K. M. Lynch, W. H. Zugler, W. C. O'Driscoll, G. McF. Mood, C. W. Kollock, and J. T. Rhame constituted the committee. The decorations were original and unique in their way symbolizing interesting features of the medical student's life, and the occasion was declared by the more than seventy couples participating to have been a most delightful affair.

The Lenoir County, (N. C.) Medical Society held a recent meeting at Kinston. N. C. Dr. F. A. Whittaker was elected President, and Dr. Z. V. Moseley, Secretary. It was decided to hold regular monthly sessions hereafter.

The American Practitioner, New York,

has been purchased by The Urologic Publishing Association and consolidated with the American Journal of Urology, Venereal and Sexual Diseases. The consolidated journal will be under the editorship of Dr. William J. Robinson. The publication offices will be at 12 Mt. Morris Park West, New York City.

Dr. C. O. Abernethy, Raleigh, N. C., is spending four months in Eastern cities doing post-graduate work.

The Third District Branch of the Medical Society of North Carolina held its regular annual meeting in Wilmington, N. C., February 10, at the Orten Hotel in Wilmington, N. C. Several papers were read and discussed. The Society now numbers in excess of 100 members and is flourishing.

The Fourth District Branch of the Medical Society of North Carolina met in Wilson, N. C., February 10, and had an enjoyable session with a program of five papers each dealing with an important phase of practical obstetrics. The papers were instructive, and the discussions interesting. In the evening the members were the guests of the local fraternity at a banquet at the New Briggs Hotel.

Dr. Frank H. Russell, Wilmington, N. C., formerly member North Carolina State Board of Medical Examiners, and one of the leading medical men of Eastern Carolina, is quite ill at a hospital in Baltimore, but is reported improving.

BOOK NOTICES.

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, M. D., Clinical Professor of Surgery, New York Polyclinic. Second Edition, Thoroughly Revised. Octavo of 834 pages, with 860 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

In the short time that has elapsed since the publication of the first edition of this work many advances have been made in diagnosis and treatment necessitating in the preparation of the present edition a very careful revision of the old manuscript and the addition of much new material. Many new illustrations have been added and some of those appearing in

the previous edition have been redrawn. These additions have resulted in a somewhat larger volume, though the plan of the original work has been followed without change. No effort has been spared on the part of the author to bring the present volume up to date and to maintain the thoroughly practical character of the original work.

The numerous illustrations, 860, certainly add wonderfully to the value of the book. Every important step is illustrated and this enables the reader to grasp quickly the technic of the various procedures.

Transactions of the Thirty-Sixth Annual Meeting of the American Laryngological Association, held at Atlantic City, N. J., May 25th, 26th and 27th, 1914. New York: Published by the Association, 1914.

This volume has only been out a short time. It is gotten up in a very attractive style, the illustrations in the different articles are fine and the book is printed on a good quality of paper.

Infant Feeding, Its Principles and Practice. By F. L. Wachenheim, M. D., Attending Physician Sydenham Hospital and Mount Sinai Dispensary, New York City. 12mo, 340 pages. Cloth, \$2.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

The author has accomplished the monumental task of carefully considering the enormously extensive literature of this subject and presenting in readily available form the ultimate conclusions of the world's leading authorities and the most successful present-day practice.

So great is the volume of the literature referred to, and so widely do the authorities differ, that in the resultant confusion the practitioner who seeks light in this most difficult and important field is sure to welcome this volume in which the author gives critical consideration to the various systems and formulas, rejecting those which fail in some important particular.

It is not, however, a review of the bibliography of Pediatrics, although Dr. Wachenheim is peculiarly qualified for the task as well as for the broad consideration of the problems of infant feeding which his work affords. It is a very clear statement of the best modern thought and progressive practice, in which each conclusion is supported by indisputable evidence, and in a form which makes it immediately useful.

In the preliminary chapters a clear presentation of facts regarding infant digestion and metabolism opens the way to easy grasp of the detailed information. A point of interest is the author's demonstration of the extent to which the capacity of the infant's stomach is underestimated. Enlightening data is presented regarding protein, carbo-hydrate, salt and and particularly fat metabolism. After reviewing fully the problems of breast feeding Dr. Wachenheim concludes that even in cases of serious digestive derangement, if the supply is adequate, the only safe procedure is to keep the child at the breast.

The bacteriology of milk; milk infection; the constituent elements of cow's milk and the essential difference between it and human milk; milk regulation and the feeding of whole milk, are treated at length. While the basis of the discussion of milk modification is highly scientific, the reasoning is so logical and the conclusions so clearly stated that the practitioner cannot but find this section useful when called upon to draft a series of formulae, while the specialist will find herein much interesting new material based on the author's study and observation.

He rejects top milk method as inaccurate, as well as characterized by inherent defects. He also makes out a strong case against the percentage method, and recommends the Jacobi system of simple dilutions. The formulas presented are readily adaptable to the individual requirements of the case in hand. The cause, symptomatology, diagnosis and treatment of digestive and metabolic disorders are considered at length. A section on the feeding of older infants up to four years brings the work to a logical conclusion.

Obstetrical Nursing. A Manual for Nurses and Students and Practitioners of Medicine. By Charles Summer Bacon, Ph.B., M.D., Professor of Obstetrics, University of Illinois and the Chicago Polyclinic; Medical Director, Chicago Lying-In Hospital and Dispensary; Attending Obstetrician, University Chicago Polyclinic, Hernotin, German and Evangelical Deaconess Hospitals. 12mo, 355 pages, illustrated with 123 engravings. Cloth, \$2.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

Inclusiveness is one of the outstanding characteristics of Dr. Bacon's work. His great experience and unusual opportunities for observation in the handling of

obstetrical cases have enabled him to present concisely and yet with most painstaking fulness all the information needed by the nurse to achieve the success in this important field that is conditioned on a full understanding and complete grasp of the minor niceties as well as the fundamentals.

Indeed, as stated in the preface, the needs of medical student and practitioner have been kept in mind as well as those of the nurse. This is due as much to the author's belief that satisfactory results can only be obtained when the physician is fully posted on the approved minutiae of obstetrical nursing as to a realization that the exigencies of obstetrical practice may compel the nurse to act in place of the physician instead of as his assistant. Hence the section devoted to the handling of labor is more complete and detailed than might be expected in a work of this class.

The author nowhere loses sight of the primary purpose to develop efficiency in obstetrical nursing, but in his preliminary chapters presents a series of general observations of unique value to the nurse about to step from hospital surroundings to the changed conditions of private nursing.

The anatomical structure and functions of the pelvis, the genital and adjacent organs of woman, the development of the fetus and the relations of the child to its mother are clearly set forth. The physiological and pathological changes of pregnancy; the nursing technic before, during and after labor and of obstetrical operations; lactation; the care of the patients in both ordinary cases and in the rarer forms of puerperal disturbance, are given detailed consideration. The chapters devoted to the early care of infants, infant feeding, and to diet, embody the best present day thought on these difficult subjects, presented by one peculiarly qualified to make it available to the nurse.

Nothing has been omitted which is essential to a full appreciation of the duties of the nurse in obstetrical cases, or to the full understanding of principles and procedure. Its clear straightforward diction and uninvolved presentation of the most approved modern methods constitute it an ideal text book for nurse or medical student and a not less useful handbook for the practitioner.

A Text-Book of Diseases of The Nose and Throat. By D. Braden Kyle, A.M., M.D., Professor of Laryngology

and Rhinology, Jefferson Medical College, Philadelphia. Fifth edition, thoroughly revised and enlarged. Octavo of 856 pages with 272 illustrations, 27 of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$4.50 net.

In this edition the entire book has been thoroughly revised yet the same general plan and arrangement have been adhered to. The following new articles have been added: Vaccine Therapy; Lactic Bacteriotherapy in Atrophic Rhinitis; Salvarsan in the Treatment of Syphilis of the Upper Respiratory Tract; Sphenopalatine Ganglia Neuralgia; Negative Air-pressure in Accessory Sinus Disease; Chronic Hyperplastic Ethmoiditis, Congenital Insufficiency of the Palate; Lactic Bacteriotherapy in Pharyngeal Affections; and an article describing the Removal of a Plate of Artificial Teeth from the Esophagus.

The author's style of writing in this edition is the same, he takes up each subject from a general standpoint and all systemic conditions under diagnosis, pathology, and treatment in their relation to the special diseases of the throat and nose.

This is certainly a most up-to-date and interesting volume and should prove of great assistance to the nose and throat specialist and indeed to every doctor. The reviewer takes pleasure in recommending it.

Some Important Memoranda for the Busy Physician. Copyright, 1914, By The Fellows Med. Manfg. Co., Ltd.

This is an attractive booklet giving much information concerning Fellow's Hyphosphophites. This is an old standard tonic having been before the medical profession for nearly half a century and it is considered one of the most reliable of any of the hyphosphophites.

The Twelve Tissue Remedies of Schussler. Comprising the Theory, Therapeutic Application, Materia Medica, and a complete Repertory of these Remedies, Homoeopathically and Bio-chemically considered. By William Boericke, M. D. and Willis A. Dewey, M. D. Fifth Edition. Rewritten and Enlarged. 450 pages. Cloth, \$2.50 net, Philadelphia. Boericke & Tafel. 1914.

The demand for this book has been so great that it has been necessary to prepare a fifth edition, and what was intended originally as a mere suggestive guide to the use of a set of valuable

remedies has developed by the demands of the profession into a volume comprising the whole of our present therapeutic knowledge of the so-called Twelve Tissue Remedies.

Compilation largely from every available source has been used to supplement the authors' personal experience and knowledge of these remedies. All the published data, thoroughly sifted and critically examined, has been made use of, and the present edition will be found a reliable guide to the use of the Tissue Remedies in disease, not only as far as possible, according to the distinctive theory of Schussler, as corrected and modified by him up to the time of his death, but especially according to the finer and more discriminating method of Hahnemann.

A Practical Text-Book of Infection, Immunity and Specific Therapy with special reference to immunologic technique. By John A. Kolmer, M. D., Dr. P.H., Instructor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M.D., Professor of Pathology, University of Pennsylvania. Octavo of 899 pages with 143 original illustrations, 43 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6.00 net, Half Morocco, \$7.50 net.

For the past twenty years the science of immunity has been one of the most progressive and most active branches in the department of medicine. An enormous amount of literature has accumulated, many new terms have been coined, and numerous theories have been adduced; indeed, the subject has acquired an aspect of complexity that is confusing to those not especially interested or engaged in this work.

The author had a threefold purpose in view in writing the present volume, namely:

To give to practitioners and students of medicine a connected and concise account of our present knowledge regarding the manner in which the body may become infected, and the method, in turn, by which the organism serves to protect itself against infection, or strives to overcome the infection if it should occur, and also to present a practical application of this knowledge to the diagnosis, prevention, and treatment of disease.

To give to physicians engaged in laboratory work and special workers in this field a book to serve as a guide to

the various immunologic methods.

To outline a laboratory course in experimental infection and immunity for students of medicine and those especially interested in these branches.

This purpose has been kept in mind throughout the book and the Volume is one that the author can well be proud of and that every physician would do well to purchase. It has been a pleasure to look over the book.

Transactions of the Twentieth Annual Meeting of the American Laryngological, Rhinological and Otolological Society held in Atlantic City, N. J., June 19th and 20th, 1914. Published by the Society, 1914, New York: Paul B. Hoeber.

We are glad to have the privilege of looking over another volume of the Transactions of this Association and to find incorporated in it so many valuable and interesting papers.

Differential Diagnosis. Presented through an analysis of 317 cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5.50: Half Morocco \$7.00.

This is the second volume of Differential Diagnosis. In the first volume the symptom pain was dealt with and eleven other common symptoms. In the present volume the same plan has been carried further. Nineteen other symptoms have been selected, analyzed and illustrated.

Dr. Cabot has written this book in his usual clear and attractive style. The volume is well arranged, well indexed, and very durably and attractively bound.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Roger T. Vaughan, Ph.B., M.D., Volume VII. Obstetrics, Edited by Joseph B. DeLee, A.M., M.D., Professor of Obstetrics, Northwestern University Medical School. With the collaboration of Herbert M. Stowe, M.D. Series 1914. Chicago: The Year Book Publishers, 327 S. La Salle Street.

The price of this volume is \$1.35 and the price of the series of ten volumes is \$10.00. The object of the publication of these books was primarily for the general practitioner but the arrangement in several volumes enables those interested in special subjects to buy only the volumes desired.

The present volume is of special interest on account of its appropriate and numerous illustrations which add a great deal to the value of the book and aid considerably in explaining the text. The volume contains 233 pages and is very appropriately indexed.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern Medical School. Roger T. Vaughan, Ph.B., M.D., Volume VIII. *Materia Medica and Therapeutics*. Preventive Medicine, Climatology. Edited by George F. Butler Ph. G., A.M., M.D., Henry B. Favill, A. B., M.D., Norman Bridge, A.M., M.D., Series 1914. Chicago: The Year Book Publishers, 327 S. La Salle Street.

The price of this volume is \$1.50. The book contains 384 pages and is some larger than the other numbers of this series. While it has no illustrations, there are certain chapters that add to the value of the volume a great deal. Prof. Geo. F. Butler contributes largely to this number and his writings on *Materia Medica* are so well known until it would be useless for the reviewer to especially commend them. His text book of *Materia Medica, Therapeutics and Pharmacology* is one of the best that has ever been published.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Roger T. Vaughan, Ph.B., M.D., Volume X. *Nervous and Mental Diseases*. Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Polyclinic, Clinical Professor of Nervous Diseases in the Northwestern University Medical School. Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Disease, Rush Medical College. Series 1914. Chicago:

go: The Year Book Publishers. 327 S. La Salle Street. Price \$1.35.

While this volume only contains 230 pages it contains several very beautiful and appropriate half-tone illustrations. The chapter on Epilepsy is possibly one of the most valuable and interesting chapters in the volume. It alone would be worth the price of the book.

Nutrition, A Guiding to Food and Dieting. By Charles E. Sohn, F. I. C., F.C.S., Members Soc. Public Analysts, Member Cookery and Food Association. Author of the "Dictionary of Active Principles of Plants," etc. New York: E. B. Treat & Company, 241-243 West 23rd St., 1914.

The author in this volume describes the human body with respect to the digestive system, then he gives a chapter on the human body chemically considered. He is evidently impressed with the danger in the United Kingdom from the prevalence of dyspepsia, and states in the volume that it is calculated that there are in the United Kingdom at least 8,000,000 people suffering from dyspepsia in some shape or form. The book is free from fads and simply states a few facts that it would be well for everyone to know. The subject of foods is one that we certainly need to study and the present volume is so arranged that it is very valuable as a book of ready reference. It is well written and well arranged and has a very good index. Price \$1.25.

Transactions of the Tri-State Medical Association of the Carolinas and Virginia. Sixteenth Annual Session held at Wilmington, N. C., February 18-19, 1914. Raleigh: Edwards & Broughton Printing Co., State Printers, 1914.

This volume is appropriately gotten up and resembles the volumes published for the previous meetings. The index is complete and the type and paper appropriate. Altogether the volume is very attractive and contains about 276 pages. It was edited by Dr. R. E. Hughes, Laurens, S. C., Secretary of the Association. As usual he has performed his duties well.

Reprints Received.

Safeguarding in Prostatectomy, by Southgate Leigh, M. D., F. A. C. S., Norfolk, Va. Reprinted from The Southern Medical Journal.

Some Interesting Features Concerning

the Study of Pellagra, by John L. Jelks, M. D., Memphis, Tenn. Reprinted from the Memphis Medical Monthly.

Differentiation of the Diseases Included Under Chronic Arthritis, by Lewellys F. Barker, M. D., Baltimore, Md. Reprinted from the American Journal of the Medical Sciences.

On the Clinical Analysis of Some Disturbances of the Automatic Nervous System with Comments Upon the So-called Vagotonic and Sympathicotonic States, by Lewellys F. Barker and Frank J. Sladen. Reprinted from the Medical Clinic of the Johns Hopkins Hospital and University.

The Commoner Forms of Renal Disease, With Special Reference to the Knowledge of Them Most Useful at Present to the General Practitioner, by Lewellys F. Barker, M. D., Professor of Medicine Johns Hopkins University. Reprinted from the American Journal of the Medical Sciences.

On the Treatment of Some of the Forms of Cardiac Failure, by L. F. Barker, M. D., Professor of Medicine Johns Hopkins University.

The Diet in Typhoid Fever, by Lewellys F. Barker, M. D., Baltimore, Md. Reprinted from the Journal of the American Medical Association.

On Abnormalities of the Endocrine Functions of the Gonads in the Male, by Lewellys F. Barker, M. D. Reprinted from the American Journal of the Medical Sciences.

Implantation of the Generative Glands and Its Therapeutic Possibilities, by G. Frank Lydston, M. D., Chicago. Reprinted from the New York Medical Journal.

A Unique Case of Syphilis of the Cranium and Spine—With Remarks on Syphilitic Bone Dystrophy, by G. Frank Lydston, M. D., Chicago. Reprinted from the Medical Record.

Experiments With Emulsions of Organs Taken From the Dead Human Body and Sex-Glands of the Lower Animals, by G. Frank Lydston, M. D. Reprinted from American Medicine.

Further Remarks on Cancer Education,

by Southgate Leigh, M. D., Norfolk, Va., Surgeon in Charge Sarah Leigh Hospital.

Surgical Cleanliness in Railroad Work, by Southgate Leigh, M. D., Norfolk, Va. Reprinted from the International Journal of Surgery.

Abstracts of the Leading articles of the month.

Primary Hypertrophy of the Gums and Reduplication of the Lip.—Greig, in The Edinburgh Medical Journal, says that the condition is bilateral, exhibits no tenderness or inclination to bleed, and is congenital, but may not manifest itself until the eruption of the teeth. Treatment is perfectly simple and efficacious. Under a general anesthetic the knife is drawn firmly along the gum at its proper level, and the strips so marked off readily removed, first in the lower jaw, then in the upper. The wounds heal kindly and there is no recurrence. There was no necessity in any case to remove the tissue from the buccal aspect, but only from the labial aspect of the jaws. Related to this condition, of interest to both general and dental surgeons, is a curious state of reduplication of the upper lip, not at all uncommon in a minor degree, but seldom so distinctly marked as to call for surgical interference. When exaggerated it may call for surgery because of the deformity. It is always observed in the upper lip and consists of a reduplication of the mucous portion. This reduplication may be as large as the lip itself. It is evidenced during talk and particularly during smiling or singing. The ultimate results of plastic surgery are extremely satisfactory. There is not the least difficulty about the excising of the redundancy, but the part to be excised must be marked off with a knife while the lip is at rest, for the limits and extent of the deformity are obscured the moment the lip is drawn into an abnormal position. A general anesthetic is indicated.

Fibrocystic Disease of the Bones.—Elmslie, in The British Journal of Surgery, classes under this heading the affection variously characterized as bone cyst, osteitis fibrosa, etc., giant-cell sarcoma, and enchondroma. It is well known that cysts occur in many of the long bones, as well as more rarely in the skull and small bones. They may be single or multiple. They may be simple or surrounded by an

area of diseased bone, the latter often showing the conditions usually described as osteitis fibrosa. They may occur in other conditions, such as Paget's disease, osteomalacia, and osteoarthritis. They may also result from the degeneration of cartilage tumors and of giant-celled sarcomata. In addition, they may result from the breaking down of true sarcomata; and they have been recorded by Frangenheim in callus at the seat of a fracture. An investigation of bone cysts is therefore a very complicated undertaking, involving a review of a large part of the pathology of morbid conditions in the bones.

As to the humerus, cysts in the upper part of this bone are probably more common than any other endosteal tumor. Secondary carcinoma may occur here, and give rise to difficulty in older subjects, more particularly if the primary tumor is not in an accessible situation. True endosteal sarcoma of the upper end of the humerus is usually a very painful affection; the radiograph will, at quite an early stage, show that the tumor has expanded beyond the limits of the bone. Chronic abscess and gumma of the humerus are also rare; they should be distinguished by the presence of periosteal thickening of the bone.

The proper treatment of these cysts of the humerus is curetting, which should be thorough, the medullary cavity being opened above and below so as to admit normal marrow to the cavity left. The contents of these humerus cysts are fluid, varying from yellow to deep reddish-brown; sometimes clear, sometimes containing cholesterol crystals, which are probably the result of previous hemorrhages. In several cases this fluid has been cultivated; upon one occasion only has any growth resulted, and then only a white staphylococcus.

Very few cysts have been recorded in the clavicle, and they were mostly myelomata. They are still rarer in the radius. In the femur a large number have been recorded. There is often a large solid tumor. Fracture is very common and may be incomplete. Union of fractures is as a rule good. As to the diagnosis of sarcoma this may be extremely difficult. The central position of the tumor, the persistence of a layer of cortex, and the absence of periosteal changes will all suggest a cyst.

Cyst of the tibia exhibits several distinct types. The tumors occurring in young people often follow trauma. Pain and swelling are often prominent symptoms, and curetting results in cure. They

are usually lined with fibroid tissue, with patches of cartilage, and from their contents growth cannot be obtained. Most of the cysts described in the fibula have been definitely myeloid sarcomata. There are several recorded cases of cysts of the skull associated with surrounding osteitis fibrosa. Cases in which cystic tumors of fibrocystic disease of more than one bone have occurred are numerous, and apparently belong to more than one group. The various types may be summarized as follows:

Simple single cyst, with perhaps some tissue of a composite nature in the walls, but with no evidence that they have arisen from myelomata. They occur in the upper end of the humerus, in the neck of the femur in young children, in the lower end of the femur, and occasionally in other bones.

Cysts definitely resulting from alteration in myelomata. They occur in the clavicle, radius, lower end of the femur, tibia, and fibula.

Cysts intermediate between these, in which scraps of myeloid tissue have been found in what was apparently an innocent cyst, with walls of composite tissue. They occur in the humerus, lower end of the femur, tibia, and fibula.

Cysts embedded in masses of composite tissue, usually described as fibrous osteitis. They occur chiefly in the femur, tibia, and skull.

"Fibrous osteitis" without cysts. It occurs in the tibia.

Multiple cysts.

Multiple lesions; some cysts, some solid tissue containing cysts, some solid tissue without cysts.

Myeloid sarcomata and cysts, in a diffuse disease of the bones which has caused softening and fracture.

Requirements of the Harrison Law.

Fort Collins, Colorado, Feb. 13, 1915.
Editor The Charlotte Medical Journal.

Dear Doctor:—In the editorial in the February 6th issue of the Journal A. M. A. on "The Requirements of the Harrison Law as applied to the Physician" see pp 518 and 532, it says that the physician must keep a record of all habit forming drugs dispensed to patients. This is correct so far as medicines sent by mail and other indirect means is concerned but does not apply to the great mass of dispensing done by the general practitioner; viz: medicines dispensed directly to the patient on whom he is attending.

I have before me a copy of the Law and Regulations sent me by the Collector

of Internal Revenue, signed by the Commissioner of Internal Revenue, W. H. Osborne and approved by the Secretary of the Treasury, W. G. McAdoo and this is what it says on this point; "Nothing contained in this section (2) shall apply—(a) To the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist or veterinary surgeon registered under this Act in the course of his professional practice only: Provided, That such physician, dentist or veterinary surgeon shall keep a record of all such drugs dispensed or distributed, showing the amount dispensed or distributed, the date and the name and address of the patient to whom such drugs are dispensed or distributed, Except Such As May Be Dispensed Or Distributed To A Patient Upon Whom Such Physician, Dentist Or Veterinary Surgeon Shall Personally Attend;....." Under the Regulations, Art. 10 is the following; "Under the exempting provisions of section 2, of the act, no Written Order is required for the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist or veterinary surgeon, registered under this act, in the course of his professional practice only.

A record, however is required to be kept of all such drugs so dispensed or disturbed (Except Such As May Be Dispensed Or Disturbed To A Patient, Upon Whom Such Physician, Dentist Or Veterinary Surgeon Shall Personally Attend-i.e., Personally Visit) and must show;....."

Our lawmakers have rightly hedged about the handling of narcotic drug with rigid restrictions and have imposed severe penalties for infractions of the law, but they have wisely, as I believe, decided to compel the busy practitioner to keep a record of every hypodermatic injection or ordinary dose of narcotic that he may be obliged to give to his patients would be an intolerable hardship. As this is a matter of vital interest to the comfort welfare of the great body of physicians scattered all over our country, I respectfully request that you publish this letter in your Journal which reaches such a large number of readers.

Sincerely Yours
E. Stewart, M. D.

Tuberculosis of Lymph Glands in Children.—Mitchell (Edinb. Med. Jour.) emphasizes the possibility of different results being obtained according as the tuberculous material under investigation has been removed at autopsies or during

life; and that the importance of the relative frequency of the bovine and human types of infection at the different age-periods has not been sufficiently recognized. In a series of autopsies on twenty-nine children under twelve years of age dying from all causes, cultures were isolated from the cervical, bronchial or mesenteric glands of twelve and tested as to their cultural characters and virulence for rabbits. Eight cases yielded cultures of human tubercle bacilli; in four cases they were of the bovine type. Human tubercle bacilli were isolated from seven tuberculous children and one not apparently tuberculous child. Of eighteen children who presented at autopsy no visible lesions of tuberculosis, tubercle bacilli were demonstrated to be present in a single case in the bronchial glands of a child aged four years; the bacilli were of the human type. Eighty consecutive cases of tuberculous cervical glands in children under twelve were investigated after operation. Of the eighty cases, the bovine bacillus was present in seventy-one instances and the human bacillus in nine. The maximum incidence occurred during the second year of life. Among the children harboring the human bacillus the opportunity for human infection could, as a rule, be established. As regards the bovine cases, it seems more than a coincidence that in not a single case was there a history of pulmonary tuberculosis in other members of the family. In sixteen cases, however, one or more of the children in the respective families were affected with various forms of surgical tuberculosis. Out of eight cases of tuberculous peritonitis or tuberculous mesenteric gland disease, seven proved to be of bovine origin, and one of human origin. All the children were under twelve years of age, and had been fed on raw milk. An inquiry recently carried through showed that of 406 samples of mixed milk collected from the same number of milk shops in the Edinburgh milk supply district, eighty-two samples (20 per cent.) contained tubercle bacilli. He believes that the results of inoculations with autopsy material, so far as they go, furnish evidence that in cases of fatal tuberculosis in children the human bacillus is the main contributor to the mortality rate. Having demonstrated that a considerable proportion of the tuberculosis affecting children in Edinburgh and district is of bovine origin, more particularly that which affects primarily the mesenteric and cervical glands; that the milk supply

of the same area is frequently infected with bovine tubercle bacilli; and having demonstrated that a certain number of deaths occur from this bacillus, the author is of the opinion that bovine tuberculosis can no longer be considered a negligible factor in respect to the spread of tuberculosis among children, more especially since unsterilized cows' milk in Scotland is a vehicle by which tubercle bacilli must very frequently be introduced into the bodies of children. The doctor says that the campaign against tuberculosis must include the bovine sources.

Posology of Marine Heliotherapy.—D'Oelsnitz (Arch. de Med. Des Ent.) endeavors to give us some rules for the employment of marine heliotherapy, as a result of his own experience and of a study of the literature of the subject. The author says that in the present state of our knowledge of the subject it is impossible to establish any exact rules regulating the use of heliotherapy. At the same time we may formulate certain propositions which may be applied practically to the administration of sun baths at the seashore. By the intensity of the sun's action in the morbid states to which it is applied heliotherapy may give rise to different results, favorable or harmful. The action of this therapeutic agent depends at the same time on the therapeutic agent and the subject treated. The variable qualities of solar light and the unequal reactions of the organism influence the clinical results. The especial properties acquired by solar light at the seashore as well as all the properties of the marine climate should be taken into consideration in the dosage of heliotherapy. We should be able to measure the intensity of the actinic rays, since these are the most active, but we possess no accurate method of doing this. We may be guided by the temperature of the rays and the duration of the exposure. Knowing the temperature most favorable to each disease the problem consists in determining the duration of the exposures according to the individual patient, the period of treatment of the disease, and the reactions obtained. A study of the modifications of temperature, pulse, and respiration produced by heliotherapy permit us to establish certain types of reaction corresponding to the adaptation or intolerance of the patient. Modification of arterial pressure and of the blood condition are difficult to systematize, but partially confirm the favorable or unfavorable effects of heliotherapy. In tu-

In Functional Nervous Diseases

derangement of the bodily nutrition is so prominent a factor that the first consideration in the logical treatment of these affections is a restoration of the nutritional balance. To accomplish this

Gray's Glycerine Tonic Comp.

is widely recognized as a remedy of remarkable efficiency. Under its systematic use the appetite is increased, the digestion is improved and the nutrition shows a marked and substantial gain. Coincident with this nutritional gain there is a corresponding increase in nerve force with a very pronounced and gratifying correction of insomnia, indigestion, headaches, vague pains, nervousness and other symptoms of nervous origin.

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berculous affections a series of tuberculin tests allows us to judge the degree of action of heliotherapy on the disease. An individual dosage, constantly changing, is favored by the extreme variability of the morbid states, their degree of evolution, the intensity of the therapeutic agent, and the individual susceptibility. General rules may be established, which may be varied with each individual case, and the treatment increased, diminished, or suspended as circumstances may dictate.

Miscellaneous.

An Ally Worthy of Confidence.

It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastro-intestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way.

European Soldiers Prevent Infection With Iodine.

It is noteworthy that reports from the fighting zone in Europe show that a great number of wounded soldiers recover quite rapidly. Much credit is given in the surgical reports to the value of an aqueous solution of iodine, and it is said that every soldier is provided with a vial of solution of iodine with instructions to use it freely on the slightest wound to prevent infection.

The value of iodine for the prevention of infection in wounds of a local nature has long been recognized. What would seem to be the most rational methods of application, however, have been perfected in this country in three preparations manufactured by Eli Lilly & Company at Indianapolis.

These products are called Iogens. They consist of a powder, an ointment and an oil, and in their original state they show no iodine content; but on contact with the moisture of the secretions, as in superficial wounds or cavities lined with mucous membrane, they liberate small quantities of iodine slowly over an extended period

of time. The advantages of iodine preparations in these forms, acting as they do, will readily be appreciated. Some remarkable reports are on file at the Lilly home office which justify the assertion that iodine is a valuable germicide, and that Iogen, Lilly, in its best adapted form, is a decidedly improved method of applying it.

Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastro-intestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

THE MORNING VISIT.

(We are indebted to the Canada Lancet for the following from the pen of Oliver Wendell Holmes. This poem appears in only one, and that a very rare, edition of the "Autocrat's" works.—Ed.)

A sick man's chamber, though it often boast
The grateful presence of a literal toast,
Can hardly claim amidst its varied wealth
The right, unchallenged, to propose a health,
Yet though its tenant is denied the feast,
Friendship must launch his sentiment at least,
As 'prisoned damsels locked from lover's lips
Toss them a kiss from off their finger tips:—

The morning visit; not till sickness falls
In the charmed circle of your own safe walls,
Till fever's throb, and pain's relentless rack,
Stretch you all helpless on your aching back—
Not till you play the patient in your turn
The morning visit's mystery you learn.
'Tis a small matter in your neighbor's case
To charge your fee for showing him your face;
You skip up stairs, inquire, inspect and touch,
Prescribe, take leave, and off to twenty such.
But when, at last, by Fate's transferred decree,
The visitor becomes the visitée—
O, then indeed it pulls another string,
Your ox is gored, and that's another thing.

Your friend is sick—phlegmatic as a Turk
 You write your recipe and let it work;
 Not yours to stand the shiver and the frown
 (And sometimes worse) with which your
 draught goes down.

Calm as a clock, your known hand directs,
 "Rhei, jalapae—ana grana sex."
 Or traces on some tender missive's back,
 "Scrupulos duos—pulveres ipecac,"
 And leaves your patient to his pains and gripes,
 Cool as a sportsman banging at his snipes.
 But, change the time, the person, and the place,
 And be yourself the "interesting case,"
 You'll gain some knowledge which it's well to
 learn—

In future practice it may serve your turn.
 Leeches, for instance (pleasing creatures,
 quite)—

Try them, and, bless you! don't you find they
 bite?

You raise a blister for the slightest cause;
 But be yourself the great sublime it draws,
 And, trust my statement, you will not deny
 The worst of draughtsmen is the Spanish fly.
 It's mighty easy ordering when you please
 "Infusum sennae—capiat uncias tres."

It's mighty different when you guzzle down
 Your own three ounces of the liquid brown.
 "Pilulæ"—"pulvers"—pleasant sounds enough,
 When other jaws receive the shocking stuff;
 But, oh, what flattery can disguise the groan
 That meets the gulp that sends it through your
 own?

Be gentle, then; though Art's inspiring rules
 Give you the handling of her sharpest tools,
 Use then not rashly—sickness is enough.
 Be always "ready"—but we never "rough."
 Of all the ills that suffering man endures,
 The largest fraction liberal Nature cures;
 Of those remaining 'tis the smallest part
 Yields to the efforts of judicious Art.
 But simple kindness—kneeling by the bed
 To shift the pillow for the sick man's head,
 To give the draught that cools the lips that
 burn,

To fan the brow, the weary frame to turn—
 Kindness untutored by our grave M.D.'s,
 But Nature's graduate, whom she schools to
 please—

Wins back more sufferers with her voice and
 smile

Than all the trumpery in the druggist's pile.

Once more—be quiet coming up the stair;
 Don't be a plantigrade—a human bear—
 But stealing softly on the silent toe
 Reach the sick chamber, ere you're heard be-
 low;

Whatever changes there may meet your eyes;
 Let not your looks proclaim the least surprise;
 It's not your business by your face to show
 All that your patient doesn't wish to know.
 Nay—use your optics with considerate care,
 And don't abuse your privilege to stare.

In Goitre

—and thyroid derangements in general—
 there is no remedy so uniformly effective as
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 quantities and over periods that are necessary
 to produce the effects desired.

Results are accomplished with Burnham's
 Soluble Iodine in goitre and other thyroid
 affections when other measures have failed
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But if your eyes should probe him overmuch,
 Beware still further how you rudely touch;
 Don't clutch his carpus in your icy fist,
 But warm your fingers ere you take the wrist.
 If the poor victim needs must be percussed,
 Don't make an anvil of your patient's bust.
 Doctors exist, within a hundred miles,
 Who thump a thorax as they'd hammer piles.
 If you must listen to his doubtful chest,
 Catch the essentials and ignore the rest.
 Spare him—the sufferer wants of you and art
 A track to steer by—not a finished chart.
 So of your questions—don't, in mercy, try
 To pump your patient absolutely dry.
 He's not a mollusk squirming in a dish;
 You're not Agassiz—and he's not a fish.
 And last, not least, in each perplexing case,
 Learn the sweet magic of a cheerful face,
 Not always smiling—but at least serene;
 When grief and anguish cloud the anxious
 scene,
 Each look, each movement, every word and
 tone

Should tell the patient you are all his own,
 Not the mere artist—purchased to attend—
 But the warm, ready, self-forgetting friend,
 Whose genial visit in itself combines
 The best of tonics, cordials, anodynes.
 Such is the visit that from day to day
 Sheds o'er my chambers its benignant ray.
 I give him health who never cared to claim
 Her babbling homage from the tongue of Fame.

Unmoved by praise, he stands by all confessed
The truest, noblest, wisest, kindest, best.

Soldiers and Alcohol.

Men are apparently divided into two factions on the question of the value and harmfulness of alcohol, and most discussions of this important topic are marked more by heat than common sense. Recently, Secretary Daniel's order banishing alcohol from our navy has brought forth a torrent of hostile criticism, on the ground, chiefly, that it is treating the men as if they were children. It must be admitted, however, if one contemplates the subject without prejudice, that something may be said in favor of the order. Since the outbreak of the great European war, two of the nations involved have seen the dangers of alcohol and have made efforts to prevent its use by the troops. Now Sir Victor Horsley comes forth in the *British Medical Journal* for January 30, 1915, with some interesting facts concerning the effects of what he calls the "rum ration" upon the soldiers of England.

He says that the following physiological effects have been observed by both military and naval officers to follow the use of alcohol in quantities up to two and a half ounces of rum daily:

Decadence of morale; causation of friction and disorder; drunkenness; punishment; degradations in rank; decadence of observation and judgment; causation of errors and accidents; loss of endurance and diminution of physical vigor; causation of fatigue, falling out, and slackness; loss of resistance to cold; causation of chilliness; misery, and frost-bite; loss of resistance to disease, particularly that occurring under conditions of wet and cold, namely, pneumonia, dysentery, and typhoid fever; loss of efficiency in shooting. Half the rum ration causes a loss of forty to fifty per cent. in rifle shooting. The navy rum ration causes a loss of thirty per cent. in gunnery shooting.

Certainly these would seem enough to condemn the use of liquor, but it appears that the British authorities in charge of the army and navy have gone back to the provision of alcohol as a portion of the fighters' rations, although the medical authorities are almost unanimously opposed to it. Horsley shows that the use of alcohol as a stimulant is based upon the most flimsy foundation of old tradition and has practically no support from the side of scientific observation.

Whether we consider the question of

the desirability of permitting the use of alcohol among soldiers, or whether we look at the problem of the use of alcohol by the ordinary man engaged in business pursuits, these observations recorded by Horsley furnish much food for thought. By way of further comment on the alcohol problem, it might be recalled that most of our modern American industries in which men are employed about machinery have seen the dangers and disadvantages of the use of alcohol, quite apart from the question of drunkenness and immorality which are engendered by its use. With physiological and pharmacological experiments to show us that alcohol is almost a pure depressant to both the central nervous system and to musculature, and with the observations of practical business men whose sole eye is for efficiency, we are apparently forced to the conclusion that the less alcohol used, the better for mankind. While we do not believe in prohibition as either wise or effective, we believe that increasing enlightenment on this question will some day lead to a greatly restricted use of alcohol. Meanwhile, as a personal rule, how would the suggestion of Starke answer, viz., never to touch alcohol until after the evening meal, when the day's work is over? It is then least harmful; and many a drinker has come to deplore the potations of the second day—Editorial in *New York Medical Journal*.

Treatment of Aortic Aneurysm.—

Houlié (Bulletins et memoires de la société de médecine de Paris) reports a case of aneurysm of the ascending portion of the aorta, with distressing symptoms, in which, after intravenous injections of mercury cyanide and geatin had proved useless, percussion of the spine of the seventh cervical vertebra according to Abram's method was tried, with signal success. The percussion was practised daily for five minutes, and after the third treatment the pain disappeared, palpitation and dyspnea were greatly lessened, and the patient was enabled to lie down on either side. After eight sittings the patient was able to walk five miles without distress, and resumed his work as a baker. The enlarged veins on the anterior chest wall showed marked shrinkage, the area of aortic dullness likewise, and the loud diastolic murmur previously noted became much less pronounced.

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The Chondrosomes and Phosphorus Poisoning

Azzi has made an important contribution to the study of cytopathology in the discovery of distinct changes in the so-called chondrosomes or thread-granules of the cells of the liver, heart, and striated muscles under the influence of phosphorus poisoning. In the fatty degeneration of the liver cells the chondrosomes undergo a change in contour and a loss in the capacity to take stain. In the case of the heart and of the striated muscles there is a gradual disappearance of the chondrosomes synchronous with the deposition of fat droplets.—*Archivio per le Scienze Mediche*.

Schamberg's Disease.

Little reports the case of a patient aged 56 who had never lived out of Great Britain. He enjoyed good general health. He had no venereal disease; no varicose veins. His family history was unimportant; the only skin detail was that his father was said to suffer from psoriasis. The condition began twenty-five to thirty years ago with the patch on the left leg. On the right leg, where the patch was actually larger than on the left, the disease only showed itself about eight or ten years ago. Within the last few months the small isolated punctate lesions in the neighborhood of the larger patches began to appear. There was no lesion elsewhere than on the legs. The affected areas were moderately itchy, but showed no other abnormal sensations. Below the knee on each leg on the anterior surface there were large patches, 3 by 5 inches in area, of cayenne-pepper-like punctate deposits of pigment, so closely aggregated as to produce plaques of pigmentation, forming curiously angular shapes with sharply linear and sometimes serpiginous outlines. The general effect was that of a buff-colored tattooing of the skin. There was in addition to the pigmentation a slight degree of scaling.—*Proceedings of the Royal Society of Medicine*.

Distribution of Salvarsan and Neosalvarsan in the Body.—Riebes (Arch. f. Dermatol. u. Syphilis) found that the

retention of arsenic, after injections of salvarsan, in the body is in every case of longer duration than is the case with atoxyl and arsazetin. The amido group is demonstrable in the blood and urine for a short time only, while in muscle it is still present after 10 weeks. In the first 20 hours about 60 per cent. is given off from here to the body. That the remainder may be retained for a relatively long time—with neosalvarsan somewhat shorter time—before absorption is completed can also be demonstrated by histologic examination. In the internal organs, especially in the liver, there is also a storage which is more considerable with the intravenous injection of the drug.

The excretion of the salvarsan takes place through the feces and urine and occurs slower when the injections are frequently repeated. Only rarely can salvarsan be found in the urine 4-6 hours after the injection. No excretion of salvarsan could be found in the perspiration. Arsenic in traces may be found in the urine, as in the internal organs, for months. The central nervous system was most free from arsenic.

Skin Affections From Woolen Underwear.—Isaac (Berliner klin. Woch.) calls attention to a disease resembling herpes tonsurans that may result from wearing woolen underwear. The skin of the trunk and extremities is involved, the face and head being exempt, and the disease is often erroneously diagnosed. The condition has been described under the names of pityriasis rosea, herpes squamosus, herpes tonsurans maculosus, so that it seems to have been regarded as positively of parasitic origin but the fungus has never been demonstrated.

It takes from 2-3 weeks before any cutaneous symptoms appear. When they do appear they may be mistaken for lues if the eruption is extensive. Sometimes it may be confounded with pityriasis vulgaris. It usually gets well quickly under treatment with ung. sulfuratum rubrum or in obstinate cases with 10 per cent. pyrogallol salve.

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On the Choice of a Profession.

Everybody with the coming of a new year is more or less prone to make resolutions, and while most of them are not kept, it is within the bounds of reason to imagine that a few are not altogether neglected. What these resolutions are, and in how far they will effect the individual's life for the better, is a matter to be decided by each of us, for it cannot be denied that the determination that suits one may be altogether ill-fitting for another. And it is well that this should be so, for what a cantankerous world this would be if we were to take upon ourselves the task of livning up to the purposes of our friends! Dissatisfaction would hardly express our feelings; our nerves would soon become distraught, and enmity would shine from our eyes. Now let us admit at once how wrong all this would be, but how kindly disposed we are, nevertheless, to the resolutions of others, and especially how tolerant we are of what the young man hopes will carry him to the ramparts of success. For it is the young man who should interest us when a new year is ushered in; not the oldish man who makes resolutions which he knows he cannot keep: his past experience has taught him the futility of attempting to make an inelastic brain elastic enough to grow a new order of fixed purposes after the age of thirty. And the young man we have in mind is not the sprig whom Fortune has smiled upon, so that all he need be is a dilettante to satisfy his parents or friends, but the serious sort who must choose a profession so as to make a livelihood—and this is a bitterness in after life—have it chosen for him by a well-meaning but misguided parent. Robert Louis Stevenson tells us a deal on this very interesting subject in a recently discovered essay, "On the choice of a Profession," which Lloyd Osborne has brought to light in Scribner's Magazine for January.

Let us suppose that we are in the presence of a young man who resolves to embark on a medical career. Let us suppose also that our garrulity, our testiness, our disillusiones are in abeyance and that we are amiable enough to lend a willing ear to his enthusiastic talk, and this without the slightest comment on our part. Although our attitude may have all the qualities of the sympathetic listener and although the young man's enthusiasm may be of the exalted sort that has the cocksureness that needs no support from others to bolster it up, it will not be long before he asks the

pertinent question, "Well, don't you think I have all the qualifications of becoming a first-rate (he may even say eminent) doctor? Should we then drop our mask of amiability and tolerance, and speak the truth, or should we merely recognize at once how wrong it would be to destroy enthusiasm by any unkind word, when for all we know there may be the right sort of inclination or preference back of words that are almost hyperbolic in their exaggeration? Or would it be better to give the sort of advice that is evidently desired, and without any circumlocution make the statement—that no other career would fit our interlocutor so neatly as a medical one?"

At this time when resolutions for the coming year are flying hither and thither to make of the next twelvemonth an ex- of high intents and things almost insuperable that shall be accomplished, a sombre view of past failures in medicine would be decidedly out of place. And yet, is it not a fact that among the resolves let loose at the present time there is a goodly number coming from young men who are quite sure that a medical career is the one for which Nature has fitted them? They may have seen only the glitter of the thing—the possibility of large fees, or they may have had a friend who with less mentality than themselves is already, after some five years in active practice, doing so well that no doubt can be cast on his fitness for the role of a medical man. Emulation is quite commendable; without it ambition would lose its best handmaid; but even when emulation invites only the kindest criticism, it may be the results of a very superficial manner of thinking, a manner that takes small account of the stern realities of life. And the stern realities are closely bound with the practice of medicine, so closely that the glitter is often of a lustre that is easily dimmed.

In this preachment we would set forth, just as Stevenson does in his masterly essay, the wrong that we visit on the young man by giving him advice. We would also wish to convey to the reader that, no matter how great his perspicacity, he should refrain from mapping out for another a future that may never be realized. No matter if the adviser's years have been blessed with the benefits of a successful medical career, no matter if he has arrived at the age when out of the fulness of his life he thinks he is justified in being a mentor to the young man about to take up the study of medicine, let him not be tempted into

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a role that no amount of easily-imagined forevisioning can justify. The failures in medicine come from the wrong sort of thinking on the part of the parent, but more often, we regret to say, from the family physician, who by his so-called kindly interest in the young man is responsible for the many failures which make up the darkest chapter in the history of medicine.—Editorial in *The Interstate Medical Journal*.

Sex Education.

This is the day of eugenics, the Society of Moral Prophylaxis and a host of other associations dealing with matters sexual. The question naturally arises, Are these movements for the better or worse? Do they accomplish the purpose which they set out to or not? Have they a corrupting or a beneficial influence? If one stops and considers that medical students with their knowledge of the venereal infections will subject them to the possibility of contracting lues or gonorrhoea without the apparent least hesitation, one becomes pessimistic and concludes that the energies of these societies are wasted, its seed sown in barren ground. But, on the other hand, when one stops and reflects, the thought comes, Has any beneficent movement at the outstart accomplished its purpose? It is only after years of agitation that good grows out of these movements. Education, and more education, is indeed necessary before the idea begins to seep through the masses that there is a particle of good in the movement, and one day in the dim future one awakes to find that the idea has indeed taken hold, that the seed is germinating, that the community is alive to the necessity for a change of viewpoint. Though only in its incipency, undoubtedly these educational movements concerning the sexual side of life have accomplished good, and one cannot predict at this time the benefits which are to arise out of them in the future. Mistakes have undoubtedly been made, and more will be. But one learns by mistakes to avoid them. Broadly speaking, the child should be informed, and at a comparatively early period, by his parents concerning the proper care of the body, the anatomy and physiology of the sexual organs, the diseases to which they are heir, and, above all, how to avoid evil consequences thereto. Sooner or later the child will absorb this knowledge from the corner gang, obscene literature or observation. Which is, therefore, the better method

for him—to be discretely and reverently informed by his parents or vulgarly by his companions? For the child's best interests, undoubtedly by the parents. This is one form of effort the sexual educators are developing, and a form which should be fraught with good potentialities. Wile in the *Albany Medical Annals* says: "In so far as the fundamental facts in sex education are to be acquired previous to school age, it is manifest that the responsibility for laying this foundation rests upon the home. Attempts to arouse the parents through the medium of the school would undoubtedly awaken their consciences so that they would respond to the appeal to give the necessary facts along the lines suggested by capable teachers. Parents are particularly capable of giving natural instruction, once they appreciate their opportunities for natural instruction in view of their familiarity with the vocabulary of their children, their companions, and their general experiences." The ethical lessons involved in sex education assume the utmost importance. Considered for the standpoint of biological development, physical education, civics and ethics, the high school may afford definite instruction upon the meaning of puberty and the relation of the sex instinct to personal success and physical health. The wider problems of the relation of chastity to family welfare, eugenics and racial advancement can be discussed without equivocation, providing that undue stress is not placed upon the venereal diseases and other pathological phase of the subject. To seek to inspire fear and to establish character upon this principle is poor pedagogy. The attempt must be made to constructively create a desire for clean living and self-control on the basis of a positive knowledge of the essential values of sex facts. The dangers of sex education in the high schools are practically negligible, provided the instruction is placed upon a high biological, ethical and social plane. This is a problem of education which has been neglected. As education is for the purpose of imparting useful knowledge, this feature should no more be neglected than mathematics, spelling, or any other supposedly necessary study.—Editorial in the *Maryland Medical Journal*.

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the clinic of G. F. Roerer, the method has been highly perfected, and the author presents the following summary of the results he obtained during the past year. All in all, 1223 cases were operated under this anesthesia, including many vaginal and abdominal operations lasting over one hour. Patients suffering from spinal disease, syphilis, severe tuberculosis and tendency to headache and conditions of excitement were excluded. Anesthesia was complete in 272 cases, for over forty-five minutes, with stovaine in 76.7 per cent.; with tropacocaine in 66 per cent.; while it lasted less than fifteen minutes with stovaine in 5.8 per cent. and with tropacocaine in 10 per cent. In the succeeding 500 cases, the figures for stovaine were 86.6 per cent. and 6.5 per cent., and for tropacocaine 85 per cent. and 4 per cent. In the latest series, a 5 per cent. solution of tropacocaine in 0.6 per cent. saline as supplied by Merck in ampules of 1 Cc. was employed exclusively. An hour before operation the patient receives morphine 0.015 Gm. ($\frac{1}{4}$ grn.) with scopolamine 0.0004 Gm. (1-150 grn.). The puncture is performed between the second and third lumbar vertebrae and in ten minutes the anesthesia is usually complete. Perfect results were obtained in 89.54 per cent., while the anesthesia lasted between thirty and forty-five minutes in 1.43 per cent., between fifteen and thirty minutes in 2.24 per cent. and less than fifteen minutes in 6.76 per cent. The most frequent disturbance during operation was nausea and vomiting (7.8 per cent.), rarely were there more serious effects such as marked excitement and asphyxia. The most frequent post-operative symptom was headache (1.4 per cent.); other very rare sequelae were paralysis of the abductors and transient psychoses. The method is most highly recommended.—Muench. Med. Woch.

Constitutional Obesity and Intestinal Secretion.

According to the experience of Roemheld, the female sex is prone to suffer from obesity with diminished metabolic energy. The women who are affected are of a pasty, bloated type, usually in the preclimacteric period, and though they deliberately underfeed, they still put on weight. Women who have had their ovaries removed, and presumably therefore are under some abnormal sexual influence, constitute a special type.

In such cases, benefit has been derived from an exclusive milk diet for a number of days, and also from a diet which contains no salt, continued over a long period.

As a rule, dietetic treatment alone does not bring adequate relief, nor does treatment by movements or other physical methods.

Organo-therapy remains the only resort. The author repeatedly witnessed good results from ovaraden-Knoll, in combination with triferrin, even after the failure of other ovarian preparations. The reason for the superiority of the preparation over other ovarian preparations does not appear to be clear. That there is any variation in the action of different preparations of the same organ may be due to the fact that these preparations should only contain the constituents of the organ of which the extract is made, and should not contain any of the chemical substances employed in making the extract. The author details a series of observations wherein women regularly lost weight as a result of the administration of ovaraden, after the failure of all other methods. Corresponding trials with spermin preparations, in the case of males, had no effect.—Med. Klinik.

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

The Treatment of Inaccessible Hemorrhage.

Every physician feels the need occa-

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with, at the same time, a minimum of its evil
influence, are secured with

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BROMIDIA meets the most exacting clinician's demands.

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sionally of a reliable agent in persistent hemorrhage that is inaccessible to the ordinary modes of treatment. In Coagulose we have a product that meets this want—meets it better, it is believed, than any agent hitherto employed for the control of hemorrhage due to defective coagulation of the blood. Coagulose is prepared in the biological laboratories of Parke, Davis & Co., from normal horse serum. It is a sterile, anhydrous powder, obtained by precipitation. It contains the fibrin ferment necessary for clotting the blood and is soluble in cold water. It is administered hypodermically (subcutaneously).

Coagulose is indicated in all cases of hemorrhage due to defective clotting of the blood, as in purpura, hemorrhage of the new-born, nasal hemorrhage, hemorrhage from gastric or duodenal ulcer, pulmonary hemorrhage, hemorrhage during and after prostatectomy, hemorrhage from the kidney pelvis, hemorrhage from the bladder, uterine hemorrhage, and hemorrhage after turbinectomies and tonsillectomies. It is also useful as a local styptic to bleeding surfaces. For this purpose the powder may be applied on a tampon or on sterile gauze or cotton. Coagulose is supplied in 15-Cc. glass bulbs, each containing 0.65 gramme of the powder, equivalent to ten cubic centimeters of blood serum. A solution is made by the addition of six to eight cubic centimeters of sterile water.

Physicians are advised to write Messrs. Parke, Davis & Co., Detroit, Michigan, for their brochure on Coagulose, which contains the original article of Drs. Clowes and Busch, of Buffalo, who perfected the product, together with other valuable scientific research matter pertaining to the serum treatment of hemorrhages and blood dyscrasias.

Antisepsis Versus Asepsis in the Present European War.

It has long been a mooted question whether antisepsis or asepsis should prevail in the treatment of wounds, and while in more recent times the pendulum has swung in the direction of asepsis, the exigencies of the present war bid fair to carry it in the opposite direction. The management of bullet, shell, shrapnel or bayonet wounds on the battlefield is an entirely different proposition to that encountered in a hospital where the injured can receive the benefits of strict aseptic precautions. Modern aseptic methods are truly wonderful, but where so many thousands of wounded require attention as in the present conflict they have proved impracticable. Authentic reports from British, French and German surgeons shows that one great scourge of this war is tetanus, and the outbreak of this most dreaded and fatal disease was only faintly anticipated until a large number of cases were observed in the military hospitals. The reasons for its occurrence are simple, however. The battles are being fought over agricultural lands that have been tilled so completely and for so long a time, with the accompanying use of fertilizers, that most of the soil contains tetanus bacilli. Injuries from bursting shells or shrapnel are in a much greater proportion than in most of the other wars, the result being that such wounds are wide and jagged, and contamination from the soil thrown up by the bursting shell or from the dirt on the soldiers' clothing is to be expected. Infection with tetanus bacilli is therefore liable to occur. It is in this class of wounds that the prophylactic use of tetanus antitoxin in addition to the antiseptic treatment is of great value. The chief causes of infection are: (1) There is often long and unavoidable delay in

collecting the wounded and commencing treatment. (2) The wounds may be very large and complicated and almost impossible to disinfect thoroughly. (3) In a great many cases no attempt is made to secure disinfection, or if it is made it is utterly inefficient. The treatment of these wounds, therefore, must be considered under two headings according to the time at which they come under the observations of the surgeon: (a) those which can be treated during the first twenty-four hours after their infliction, and (b) those which are met with at a later period, when sepsis and suppuration are already established. During the first twelve hours the great majority of wounds, unless they are large, irregular, or complicated with extensive comminution of bone, can be readily made aseptic, and if proper precautions are taken afterwards, they will remain so. After from twenty-four to forty-eight hours the use of antiseptics is indicated, those chiefly employed being carbolic acid, bichloride or biniodide of mercury and iodine, although permanganate of potassium and hydrogen peroxide are favored by some military surgeons. The English method leans to the choice of carbolic acid in a saturated watery solution, 1 in 20, or an oily solution, 1 in 10. The Germans prefer bichloride solution 1 to 6000, or iodine. The antiseptic power of the latter is practically the same as that of carbolic; so that a 2 per cent. solution has the same value as a 1 in 50 carbolic lotion. In wounds of the second class free drainage and antiseptic dressings are employed, the best thing being salicylic acid gauze, with a layer of mercury cyanide gauze next to the skin to protect it. Thus the wound is sterilized and bacterial growth is prevented by the antiseptic. In wounds more than forty-eight hours old sterilization cannot be made complete by any form of local applications. In these cases the use of strong antiseptic and the mechanical removal of any considerable amount of tissue are contraindicated, as they tend to break down the natural barriers which have formed. Instead, continuous irrigation with normal saline solution seems to be the best of all methods, and drainage should be established by means of open rubber tubes, counter-openings being made if necessary. Here as before, the dressings should be antiseptic. Bullet wounds, on the other hand, are giving very little trouble, for the high velocity of the missile seems to sterilize the wound by the heat generated, so that if

the parts are promptly protected by an antiseptic dressing (which all soldiers carry in the first-aid packet) the dangers of infection and tetanus are largely avoided.

The conclusions to be drawn are the following: (1) Injuries received in modern warfare should be handled as little as possible. (2) An aseptic dressing promptly applied to a bullet wound will prevent infection. (3) An antiseptic dressing should be applied to all lacerated and infected wounds. (4) Iodine, mercury and carbolic acid are still the antiseptics chiefly in use. (5) Under no circumstances should wounds be touched with the hand. (6) The aseptic method will never be discarded, but antisepsis will probably be employed much more than before.—Editorial in the *International Journal of Surgery*.

Hundred and Ninth Annual Meeting of New York State Medical Society.

The Medical Society of the State of New York Will hold its hundred and ninth annual meeting in Buffalo, April 27-29. On account of the European War, this will probably be the largest medical meeting of the year, except perhaps that of the A. M. A. in San Francisco. Through the co-operation of the military authorities, the meeting will be held in the 65th Regiment Armory—not the old arsenal, now the City Convention Hall. This armory is one of the largest in the country and will afford accommodations for all activities of the meeting, except the annual banquet. A restaurant will be conducted in the building, there will be ample space for commercial and scientific exhibits, and an abundance of halls for general and section meetings. Even an automobile park will be provided on the armory grounds. No one need leave the building except to sleep, unless possibly to attend lectures to the laity which will be given by prominent visiting physicians and which will probably be held in the Masten Park High School across the street.

The choice of the armory is fortunate in another sense, as indicating the organization of the State Society as an arm of the state government. On the last night of the meeting, a regimental parade and review by Gen. Gorgas will be held.

We venture to assert that this meeting will be conducted to insure greater comfort and convenience to guests than any other gathering of the kind. There will be no waste of time in passing from one section to another, no mental strain in

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fixing one's attention on gall stones while, on the other side of a velvet (?) curtain, some one is discoursing on ventral fixation or an organization of "hundred-point" men is discussing the best methods of selling varnish.

The local committee of arrangements consists of the chairmen of the following sub-committees. Suggestions and offers of assistance will be gladly received. We understand that the annual meeting is entirely self-supporting, from the sale of concessions, so that no financial contributions will be asked.

Sub-Committees of Arrangements.

Reception: Chas. G. Stockton, chairman, 436 Franklin Street; Arthur W. Hurd, Henry R. Hopkins, William H. Thornton, Henry C. Buswell, Herman E. Hayd, Edward J. Meyer, Harvey P. Gaylord, DeLancey Rochester, Allen A. Jones, Edgar R. McGuire, Thomas J. Walsh, Bernard Cohen, James A. Gardner, Francis E. Fronczak, Lee Masten Francis.

Meeting Rooms: Nelson G. Russell, chairman, 469 Franklin Street; Albert H. Briggs, Renwick R. Ross, Stephen Y. Howell, Theodore M. Leonard, Arthur C. Schaefer.

Publicity: A. L. Benedict, chairman, 228 Summer St.; William W. Quinton, George A. Himmelsbach.

Ladies: Edith R. Hatch, chairman, 2620 Main Street; Maude J. Frye, Myrtle A. Hoag, Lucy A. Kenner, Caroline Lichtenberg, Elizabeth Dort, Katherine Munhall.

Transportation: Carl G. Leo-Wolf, chairman, 481 Franklin Street; William Gaertner, Robert E. DeCeU, Edward M. Tracy, Nelson W. Strohm.

Banquet and Hotels: Lesser Kauffman, chairman, 534 Elmwood Avenue; Joseph F. Whitwell, William G. Bissell, Earl P. Lothrop, Fredrick J. Parmenter.

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Treatment of Pyelitis.

During the acute attacks of pyelitis, Fritz combats the fever, regulates the function of the intestines, and gives large amounts of water to drink. The source of infection, he states, should be discovered and properly treated. Hexamethylenamine and its compounds may be prescribed, but usually do little good. In searching for sources of infection, intestinal catarrhs and constipation, infections of the frontal and maxillary sinuses and tonsillitis should not be forgotten. The chronic cases also demand the ingestion of large amounts of fluid but if improvement is not rapid, local treatment must be instituted. The bladder should be filled first with a solution of mercury oxycyanide, then the pelvis is irrigated with a solution of the same drug (1:2000) until the return fluid is clear. Finally, a solution of collargol (1:200) is instilled in amounts that will not cause colic (usually 5 to 10 Cc. unless the pelvis is dilated.) This treatment fails only where the pus is so thick that it cannot be washed out, where the kidney itself is affected, or where, owing to anatomical conditions, free drainage is impossible.—Therap. d. Gegenwart.

Sodium Bromide in Gastric Diseases.

Leven extols the value of sodium bromide in the treatment of diseases of the stomach. With or without the addition of bismuth subcarbonate sodium bromide is useful in sensory, motor, and secretory disturbances of the stomach which are not controlled by dietetic measures. The author prescribes sodium bromide in those cases in which alkalies, belladonna, and opiates are frequently used. The drug is of eminent value, he states, in the treatment of hypersecretion, spasm of the cardia or pylorus, and the various ill effects of aerophagia. The dose advised is about 15 grn. in half a glass of water one-half hour before meals.—Bul. Gen. de Therapeutique.

The New Specialty in Medicine.

On account of the high degree of specialization which has already come

about in medicine the proposal to establish, or rather to emphasize still another specialty will at first possibly arouse some apprehension. When the profession, however, come to a full realization of the wide reaching importance of a study of the ductless glands, we are confident that they will admit that here we have a field quite broad enough, and rich enough in possibilities for good to warrant the special attention and liberal amount of space we purpose to devote to it.

In order to place before our readers the latest authentic information regarding the progress being made in this field, the New York Medical Journal inaugurates in this issue a new department, from the pen of Dr. Charles E. de M. Sajous, the acknowledged American pioneer and authority in this line of investigation. This series of articles will appear exclusively in the Journal; it will be devoted solely to the study of the functions of the ductless glands and the internal secretions and their bearings on disease and therapeutics. It is only of late years that we have come to any proper appreciation of the important part which the internal secretions play in health and disease. It is expected that by devoting adequate study to this department of medicine the physician will be enabled materially to increase his efficiency as a conservator of the health and sanity of his patients.

While the subject will be treated in a scientific spirit, its application in diagnosis and in the practice of medicine will be brought prominently forward, since it is for the practising physician rather than for the laboratory expert that these articles are intended. There are a number and variety of conditions which can be understood and properly treated only after full comprehension of the endocrinous glands.—New York Medical Journal.

Sex Hygiene in the Schools.

There are on many sides vaporings of instruction in sex hygiene. Congresses of various sorts have attacked the general question and it has been debated eugenically, sociologically, physiologically and even medically and morally. Opinion is still divided as to how the subject should be taught and when and how.

Text-books have already appeared and so have brochures for boys and for girls, all worthy enough.

The accomplishment so far has been worth while, but it has occasioned full li-

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cense in the discussion of sex questions, and the public, that is, the reading public, need no longer be mawkish over reading sex problems.

We confess to some lack of understanding so far as sex hygiene is concerned and believe that any discussion of the subject should be prefaced by a definition of exactly what is aimed at in proposing instruction in sex hygiene in the schools. Everybody accepts the fact that the improvement in society needs first of all an improvement in moral viewpoint and that this may be obtained if the young person begins early to know moral sex life with the idea of training up to it. Sex knowledge comes soon enough, but usually this is not in a wholesome way.

The schools have begun by the teaching of physiology, in a primitive way, by leading young minds to think of the body as a delicate machinery, needing care and suffering if abused. Some schools even expand the sex side by presenting ideas on reproduction, carrying the child through plant life and lower animal life, up to human reproduction. All of this is commendable, but is this sex hygiene?

The real question involved is usually side-stepped, namely, the instruction of the young in prevention of vicious conceptions of sex to the point that a moral plane may be established and maintained during adolescence and until a natural and moral appreciation of sex may later on establish its own virtue.

What the consideration ought to be is the preventing of sex abuse as a phase of sex hygiene, and with this as a text direct instruction might be given with better effect, but not in the schools.

It is the parents' function to teach such things, and we should more and more educate those in the home, responsible for the coming generations, to the end that they may take up the burden by teaching the young. Sex instincts develop early enough to be observed, and the parent who is careful will see the signs sooner than a teacher could. The instruction should be aimed at enlightening the parents, then, as to the need of their charging themselves with the guidance of the young.

Social hygiene is developing. Only within the month a regular publication is announced, emanating from a national organization, engaged in educational propaganda for social hygiene. The work of such a body should enter every home, to anticipate by a proper prevention the necessity of a later reform.

We are learning to see through the veil

of hypocritical conventionality and to look at vice as a disease of society with remedies at hand, but with certain difficulties in administration, needing only a proper understanding to make them effective. If everybody preaches sex hygiene, and if most everybody practices it, the youth will not need much instruction beyond that which example teaches.—Editorial in *The N. O. Medical and Surgical Journal*.

The Call of the Great.

This is a year in which the people living east of the Alleghanies ought to look westward and try to find out something about the Mississippi Valley, the vast mountain areas, and the shores of the Pacific. The people living in the Mississippi Valley know the whole country better than those of any other section, and are, indeed, our most national and cosmopolitan Americans. They are less provincial than the people of New York, Boston, Philadelphia, and Baltimore. But as a rule they know the East and the Atlantic better than they know the farther West of mountains and Pacific. And this year they also should find themselves drawn towards the Golden Gate. The country itself, with its great natural and scenic features, its developments of agriculture, its new towns and cities, will always furnish the chief attraction for intelligent travelers. But some special occasion, like a World's Fair, may very properly stimulate and direct the tourist tide in a given season. California deserves high praise for the sagacity and confidence shown by her in not allowing the European war to cause the postponement of the Panama-Pacific Exposition. Her courage will be rewarded.

There can not, of course, be so large a participation in the enterprise by foreign nations as was expected; and in some ways it will not be possible to give the Fair so rounded an international character as had been originally desired. But the undertaking has been magnificently worked out, its attractions will prove all and more than had been hoped for, and the peoples of the Western Hemisphere may well decide to make California their Mecca this year. California itself is always a realm of interest and delight to visitors, particularly from the Eastern part of the United States, because of its almost inconceivable range of climate, scenery, and products both natural and cultivated. Northward from san Francisco are fertile valleys, lofty mountains, and vast forests. Southward are areas

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of specialized products, particularly on irrigated land. Still farther south are the orchards of oranges and other citrus fruits; and in the mild sub-tropical climate of the Mexican border almost everything possible will grow, wherever water can be supplied. California is a wonderland.—From "The Progress of the World," in the American Review of Reviews for February.

Winter Coughs and Colds.

The severe and often intractable coughs of winter colds too often owe their continuance to systemic weakness. To relieve and overcome them it is essential to raise the vitality and nutrition of the whole body. For this purpose there is no remedy so prompt and reliable in its effects as Gray's Glycerine Tonic Comp. and its easily proven efficiency in affections of the respiratory tract—chronic bronchitis, incipient tuberculosis, asthma, laryngitis and catarrhal diseases in general—readily accounts for its widespread use by the profession in this class of ailments.

Its regular systematic administration rapidly restores the nutritional balance and as patients gain in strength and weight usually the most intractable coughs grow less and less and finally disappear.

A unique little brochure (24 pages) on "Clinical Symptomatology" has already been distributed to the medical profession by the Purdue Frederick Company, who prepare the well-known Gray's Glycerine Tonic Comp. This consists of a number of Tables of Charts giving the common or usual "symptom-complex" of each of sixty different diseases and will prove of exceptional value for reference purposes. If any physician did not receive a copy of "Clinical Symptomatology" he can easily obtain a copy by addressing.—The Purdue Frederick Company, 135 Christopher Street, New York City.

Glands With Internal Secretions.

Medical preparations of the Ductless Glands should be carefully prepared from absolutely fresh raw material. Some of this material decomposes rapidly on exposure. There is one manufacturer (Armour) so situated that glands and membranes used in this work may be put into process if necessary before the animal heat is out of them. It naturally follows that the products of such a corporation may be depended upon. That Armour makes use of advantages is shown by the fact that Pituitary Liquid and such things are without added preservatives. The manufacturers themselves believe that the excellent keeping qualities of their goods are due to the freshness of glandular tissue, as well as to improved processes. Armour will supply to the medical profession Pineal substance, Posterior Pituitary, Anterior Pituitary substance, and any other glands that are collectible.

Glyco-Thymoline in Tonsillitis.

A local remedy must fill two requirements—It must be a detergent antiseptic and produce a degree of permanency of effect.

Glyco-Thymoline as a gargle, or used in an atomizer, produces excellent results. It rapidly relieves the dry congested condition of the mucous membrane by its exosmotic action and its anodyne effect is immediate and lasting.

Glyco-Thymoline is harmless, and if any is swallowed will produce a beneficial effect by breaking up any mucous plugs that may have gained access to the stomach.

After an Alcoholic Debauch.

As a sedative in relieving the extreme nervous irritability and hypercerebration following excessive use of alcoholic drinks, Bromidia (Battle) Gives a striking demonstration of its therapeutic powers. A few moderate sized doses and relief is at hand.

The constituents of Bromidia, which are chosen with an eye toward purity, are carefully compounded, and thus the evil effects of hastily prepared mixtures are avoided.

It is during the spring months more particularly that the physician is called upon to treat patients, who though not ill enough to be in bed, are not at all well. The symptoms are very much like those experienced in malaria but the causes are entirely different and a different treatment is necessary.

This condition arises from the fact that in the spring the eliminative functions do not present their usual activity owing to the torpor and locked-up secretions which have existed during the winter months, when the skin neglects its duties and the kidneys are overworked.

In such cases the use of Tongaline, either liquid or in one of its tablet forms, will be attended with most beneficial results, by promoting the absorptive powers of the various glands which have been clogged and by its stimulating action upon the liver, the bowels, the kidneys and the skin.

Puny Children.

To overcome that unfortunate nutritional state so frequently seen in young children, marked by indifference to both mental and physical effort, pallor, glandular enlargement, and hypersusceptibility to naso-pharyngeal inflammations, no agent is quite comparable to Cord. Ext. 01. Morrhuage Comp. (Hagee.)

Not only does it possess large value as a tissue food, but it is palatable and easily assimilated, for which reasons it is especially desirable for continued use.

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It is made from absolutely fresh raw glands. It does not require preservatives.

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The Drinking of Mineral Waters.

"The drinking of mineral waters is an established therapeutic custom. The multitudes of persons who indulge in the water drinking at the spas, as well as the large number of physicians who repeatedly advise the treatment as an established routine, make it seem more than probable that the practice is a well-founded one. Yet we venture to believe," says the Journal of the American Medical Association, "that few at best of all those who adopt or prescribe the mineral spring therapy could offer a reasonably tenable explanation of precisely what they hope to accomplish thereby, and how they have succeeded. In some quarters there has arisen the same sort of nihilism in relation to mineral waters that one finds exhibited in respect to the use of drugs.

"When an interpretation of the alleged beneficial effects of drinking mineral waters has been indulged in the answer is sometimes made that the effects are merely those of water drinking per se. Nothing specific is claimed other than a diuresis which has given rise to that overworked expression, 'flushing out the system.' Residence at the mineral spas usually involves the simultaneous regulation of diet and the orderly pursuit of a carefully planned routine of living.

"There are, of course, mineral waters which have a determined basis for their use. Strongly alkaline waters of the Vichy type have a rational use. Laxative waters find an explanation of their effects in the presence of known purgative salts. Chalybeate waters and those which contain arsenic may serve as useful means of administering well-known therapeutic agents. But for the majority of waters there exists a sort of chaos of explanation from which refuge is taken in the vague uncertainties of radio-activity or some similar indefinite novelty."

The European war has made it impossible for Americans to go abroad for hydro-therapeutic treatment. In consequence the spas of this country will be patronized hereafter more than they have ever before, and Americans will be happily disappointed to learn that they can receive the same kind of treatment in

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"The cure of tuberculosis is a question of nutrition."—Osler.

"We have no single drug (referring to Arsenic) of equal utility in chronic forms of ythisis." — Barthow.

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Each Tablespoonful Contains;

Peder Devold's Loloten, Norway Cod Liver Oil 50 per cent
Iodide of Arsenic . . . 1-40 grain
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Iodide of Manganese 1-8 grain
Purified Gualacol . . 2mimims
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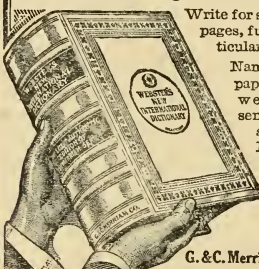
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 Springfield, Mass.

this country as they have been used to getting in France, Germany and Austria.

One of the best known spas in America is the French Lick Springs where the water possesses virtues equal to those of the great Continental spas. In addition to the excellence of the medical attendance, the sojourner at French Lick is certain of delightful hotel surroundings and most pleasant environments. French Lick, in addition to its other attractions, is the home of Pluto water.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient aets exactly what he prescribed, No "just gs good" allowed.

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Remarks on Tuberculosis From the View Point of Public Health Work.*

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Carolina, Etc., Etc.

More than once have I heard an intimation that there are too many papers presented to medical societies, as well as a redundancy of publication in current professional literature of dissertations and discussions relating to the subject of tuberculosis, that the average practitioner of medicine has grown weary of the apparent overplus written and spoken on this vital theme. If the professional concepts which were current a couple of decades past were to continue to exist to any very great extent in the minds of the ordinary medical man, or continue to dominate the thought of the laity, then it may be conceded that the criticism is possibly warranted. On the other hand if all practitioners of the healing art, are to become fully aroused to the vital importance of the knowledge of advanced modern conceptions of what tuberculosis is, how it develops, its frequency, its communicability, its results, and its possible preventability, then with a clear ideation of its potential relations to human morbidity, and a definitely demonstrated knowledge of its influence on the mortality of our people, it may be truly asserted that we may not possibly have too frequent considerations of so momentous a subject. Unquestionably, the apparent reluctance even today, with which so many excellent practitioners of good local repute, announce the diagnosis of tuberculosis in a given case, can but evince a lack of thorough appreciation of the supreme importance to the human race in not neglecting or dallying with the tuberculosis problem.

Gaining in the Battle.

That we shall always have tuberculosis with us as a pathological and a so-

cial problem to merit our serious consideration, is doubtless just as self evident a proposition as it is to assert the continued persistence in the human family of a certain sensitiveness or impressibility of the nervous system of many individuals that subconsciously demands sedation or stimulation. But if we make earnest and intelligent application of our attained knowledge of the causation and development of tuberculosis, and continue adding to that stock of information in the future two decades as extensively as it has been enriched during the past thirty years, we shall note immediate material betterment as shown in markedly lengthening the average human life as well as a greatly diminished mortality from tuberculosis.

Of special concern to those interested in public health work is tuberculosis because it is primarily a communicable disease, and for the farther reason it is responsible for not less than one seventh of all deaths. Again it is undoubtedly probably true to say that not less than five of the remaining six sevenths of our race are infected, and at some period of their lives give clinical evidence of such infection.

The evolution of public health work is naturally progressive, and is from time to time, appropriating and making good use of all scientific advance, both real and imagined. In the past the public health conscience has found its most ready response, and its most inviting field of endeavor, focused on communicable diseases that were sudden in their appearance, violent in their course, alarming in their manifestations, and terrorizing in their community influence, such as diptheria, small-pox, yellow fever, or cholera. A case of diptheria occurs in a school, immediately prompt measures are taken, quarantine or isolation, search for carriers, sundry cultures it may be taken from noses and throats, isolation, vaccination of contacts, exclusion from schools of unvaccinated children, &c. The money cost is not seriously considered or questioned, the supreme thought of the hour being to stop the prevalence of the dreaded affection immediately. Or a case of typhoid fever is seen; at once a diligent search is made for a possible source of infection, and every effort is made by the destruc-

*Not available though requested of the S. C. State Board Health office by the Secretary of N. C. State Board of Health.

*Read before the 17th annual session of the Tri-State Medical Association of the Carolinas and Virginia, Charleston, S. C., February 17-18, 1915.

tion of excreta and exclusion of flies to inhibit the advance of the disorder beyond the confines of the sick room. All of which is very right and proper, and every effort of this sort should be continued with even added zeal.

Health Officer's Duty.

But what happens when a case of tuberculosis is reluctantly diagnosed (as it too frequently is,) by many physicians? Now in the large majority of the homes in the territory covered by the membership of this association, practically nothing happens! Except the family are considerably worried, for a few days at least, over the diagnosis of the doctor, and oftentimes there is a tendency to question whether or not the diagnosis was really correct or not! Does the health officer hear of the case? No, up to this hour, only a limited portion of the people are so fortunate as to be within the jurisdiction of such a personage. But in case he is advised, does he diligently seek for other possible cases in the family? Does he give specific advice as to the disposition of the sputum? Is the patient instructed how to cough, and how not to cough? Is there farther search for a possible bacillus carrier? In a few communities, Yes; but in the large majority, No! Are any of the things so carefully performed when other known communicable disorders appear in a household done to limit if possible, the disease to the sick one? As a rule, No. Is this because tuberculosis is an infrequent disease? Not at all.

In North Carolina in 1913, there were 48 deaths from small-pox; 36 from scarlatina; 1464 from typhoid fever; while tuberculosis accused the death of no less than 5448 of our people.

In Virginia in 1913, 8 deaths were due to small-pox; 55 to scarlatina; 709 to typhoid; but tuberculosis added to the state's death roll 3591 of the population.

*In South Carolina, in 1913, the fatalities from smallpox were—; from scarlatina—; from typhoid fever—; from tuberculosis—.

Not Good Business.

If a bank, or other commercial organization conducted its business after this fashion, watching carefully for the minor oozings of forfeited funds, while an open, undisguised leak existed, that emitted a stream annually depleting both capital and profits to the extent of fifteen per cent., bankruptcy would sooner or later ensue; and were it not for the great and splendid natural resistance kind nature has provided, a similar result

would ensue to our human stock. Yet there is certainly a reason for the existence of such a situation; for this apparent indifference to the ever present peril of tuberculosis. And the rationale of the proposition apparently lies in two directions: In the first place, the onset of tuberculosis is devoid of the spectacular. It does not suddenly strike down individuals in perfect health, it is not ushered in with a chill, a raise of temperature, the development of a scarlet or pustular rash, it does not speed through the community in a few weeks leaving behind a trail of death to mark the time of its rapid career. Per contra, the victim of tuberculosis is rarely able to recall when the earliest indications of his disease become manifest; insidious, slow, a step of stealth, quietly, unobtrusively, is the march of the tuberculosis slayer of men. And this is so pronouncedly its history as written in every community, and in almost every home, that unless we read and reflect on the statistical evidence of its baleful prevalence, we do not grow alarmed, or even appreciate its unrelenting influence. Even in its final victory, so long has the patient and hopeful victim been a sufferer, his passing evokes but scant notice, for it had long been anticipated, and the lack of unusual features, and the occurrence of the commonplace fails to attract attention and its oft repetition blunts the public sensibilities.

In the second place, it is only within this generation that our entire conception of the etiology of tuberculosis has been completely revised, and our basic theories wholly changed. Formerly tuberculosis was believed to be hereditary, nonpreventable, and as well incurable—a horrid pathological cataclysm from which no escape was possible. In the course of a comparatively few years, we have come to regard it as not hereditary, but as infectious and communicable, and both preventable and curable to a very large degree. When I say this is our conception of the disease, I wish it were possible to say that all practitioners of medicine, and all the people too, have accepted the more advanced views, but such is not strictly the truth, and a vast deal of educational work is yet to be done. While a very great deal of this will devolve on the intelligent general practitioner, it remains in large part the work of the municipal, county or district health officer to properly develop in the masses of our people a practical knowledge of what science has evolved on

these lines. But the hour of awakening is here, and more and more will it become an accepted truism that tuberculosis should be prevented by starting at the proper time, that a majority of the cases, if diagnosed and treated early should be arrested or cured, and that the occurrence of the disease in a family should be regarded, not as a nonpreventable misfortune, but be looked upon as the results of a careless and wanton disregard of known hygienic and sanitary laws whose wilful transgressor stands disgraced in the community estimation.

Progress of Prevention.

From the standpoint of the doctor of public health each of the six ages of mankind require consideration and special attention in relation to what we should reasonably expect to accomplish in the next two generations in preventing tuberculosis—and when I say next two generations, I do not for one moment mean to suggest the inutility of present effort, or our inability to begin even now, to see beneficent results accruing therefrom in tuberculosis prevention work. What I do desire to stress, and impress, is the lesson that the work is long and tedious, and that it falls chiefly to the present generation of sanitarians to be permitted to merely initiate the work of salvation, to sow the seed, to institute the prevention work against the spread of tuberculosis that will be carried forward to tremendous results in future years.

But to briefly mention in a practical way the relation of the six ages of mankind to the tuberculosis prevention problem, we have first the age of pre-conception comprised in the study of eugenics, and assuredly here is a fertile field for proper regard for mating that will develop strong resistant energy in future progeny, combinations that will ensure most vigorous offspring. Then the age of intra-uterine existence recognized by all in the importance of proper pre-natal care of prospective mothers and the taking of every possible precaution to maintain in every way the highest degree of healthfulness at this important period of woman life. Later comes the tender age of infancy, and here we may well pause and consider seriously the growing scientific opinion as to the vast majority of all tubercular infections taking place in the very young, and gauge our management of the babies of the community accordingly. In doing so, the oldtime idea of the parlor or guest room, being the choice room of

the home, should be relegated to oblivion, and the nursery should receive first consideration as the most consequential portion of a human abode. Assuredly the oldtime thought of crowding the little ones into a small room should be forever stopped, and if the small children are kept much within doors, it should be with intimate contact with a maximum of fresh air available at all times, day or night. Speed the day when we learn houses are useful protections against the extreme severities of the weather, as well as convenient places for carrying on various and sundry avocations incident to the business and social side of life, but humankind must live more in the open air if we retain and increase the desired results in this anti-tuberculosis contest. And children, well, I can only wish that children could all have as much of the freedom of country life as our pigs habitually receive.

The many and complicated problems incident to the school age of life in connection with tuberculosis, are receiving much attention and bid fair to worked out along correct lines.

Exposed to Danger.

The vocational age carries with it conditions that unfortunately so often reduce the vital resistance to the point where the tubercular infection received during, and quiescent since, early life, now becomes a rampant and a regnant force to be reckoned with. Vast betterment of the environs under which many human beings labor daily for necessary food and raiment, are daily being made, but here much work remains to be performed, and thankfully it is recalled that the growing spirit of the times is strongly favorable to the very best and kindest consideration possible for the wage earner. In the adjustment of many needful reforms that affect unfavorably the vocational period of human life, the public health conscience is destined to play a more conspicuous and influential factor than would have been dreamed of a generation past.

Old age in lesser degree than either of the former ages of life, influences the tuberculosis problem, for with the learning and practicing of correct sanitary living during the earlier periods of existence, the possibilities of an active tubercular process in the body will loom far less on the horizon of senility, being probably secondary to conditions of vascular tension.

In the work of the past, we have been

much handicapped by following theories that were merely half truths—a danger that ever besets all advanced sanitary performance, for oftimes the partially evolved scientific theory when fully uncovered as a demonstrated truth, is a thing manifestly different from what it appeared to be when only partly discovered, hence the over-enthusiasm of willing workers are at times changed to the helplessness of apparent defeat.

Our most noteworthy sanitary successes have come where we had definite knowledge of the character of the disease cause we were engaged in trying to suppress: witness, yellow fever, cholera, malaria. The cause of tuberculosis is now known to be a minute vegetable organism. Its methods of development and extension through a family or a community, we may more than surmise. While appreciating most fully the value of, and the imperative necessity of maintaining a high standard of dairy inspection to ensure that our milk supplies, and more especially that fed to the babies, shall be known by frequent tests to be wholly free from tuberculosis infective possibilities, it is well to constantly bear in mind that this source of infection for human beings is a minor one when compared with that of personal contact with infected human beings in the intimacies of daily life in the same family with an infected person. Undoubtedly the chief source of human tuberculosis is from other humans. Tuberculosis is a far more common disease than it is believed to be by the average citizen, and I had almost said, than many of the fairly good men of our own guild believe.

Tuberculosis Carriers.

A careful study of the families in which adult cases, and also tubercular cases in childhood as well, will in many cases reveal other unsuspected, or at least, undiagnosed cases; sometimes, active, sometimes, inactive or quiescent, sometimes, even arrested or cured cases are found unknown to the victim himself. Just as certainly as we have diphtheria carriers or typhoid carriers, do we also have carriers of tuberculosis infection in the persons of those suffering with tuberculosis whose vital resistance has not been broken down, or whose bodies have, fortunately for them, built up an immunity affording protection for the time at least, but which may not prevent their sometimes having open lesions in the lungs throwing off tubercle bacilli. Here we have disease engendering pos-

sibilities until recently unsuspected. These individuals, not recognized as having tuberculosis, suffer occasional attacks of various illnesses, such as chronic or acute bronchitis, malaria, atypical typhoid fever, atypical pneumonia, pleurisy, catarrhal affections of the respiratory apparatus, and of the digestive tract also, stomach disorders, liver troubles, asthma, and a variety of other affections, all possessing in common, an underlying tuberculosis basis of infection.

If we can only hasten the day of systematic and searching examination, at regular stated intervals, of all individuals, whether healthy or not, we shall succeed in making earlier diagnoses of incipient tuberculosis, and thus benefit the patient and those about him as well, by instituting correct measures of therapy at an early day, and restrain the pernicious influence of possible carriers earlier. All in active practice, have treated in the past, and doubtless continue to prescribe for the terminal stages of a protean disease that through its many disguises, coupled with our past ignorance, has deceived and medically mocked the elect of our profession for ages, and thus continues to exist and flourish the dread disease.

Both physician and medical public health officers, (and while I occasionally hear of their being suggested, I remain skeptical of any medical public health officers save well trained individuals possessed of a medical education, and if possible, some additional special training in public health work!) before they may stop the progress of the disease, must unlearn some of the fallacies with which we have permitted the indoctrination of the public. There should be as careful studies made to locate tuberculosis carriers as are made to ascertain carriers of any other disease affecting human beings. All must appreciate the possible significance of the possible condition of the person who tires easily, perspires on the minimum exertion, loses weight, and is affected with a feeling of malaise, even though he has no cough, and never had a hemorrhage in his life. We must learn that expectorating into the gutter by the known tuberculosis patient, or even on the sidewalk, or in the cars, while certainly a practice to be deprecated for its manifest indecency if naught else, providing the sputum is exposed to sunlight, or the open air, is very far from being a tithe so dangerous, or carrying with it

such tuberculosis infection possibility, as is the living with and intimate association with the individual with so-called chronic bronchitis, or with the thin skinny person who has stomach trouble, plus an irritable throat. The phthisiophobic craze that has brought much discomfort and unhappiness to many persons, and without doubt wrought more to the bad than to the good, must in larger degree be unlearned, as we fully appreciate the widely spread existence of tuberculosis.

It might be well to ask today, who owns the civilized world, who controls the destinies of civilization, of science, of letters, or art, of manufacturing industry, of the varied and sundry manifestations of material and immaterial development and power, the tuberculosis folk, or those who are known to be absolutely free of the presence in their bodies of Kloch's bacillus tuberculosis? Which half is entitled to a fair deal? While not ignoring the remoter possibilities of infection, about which we have heard so much only recently, from inhalation or swallowing of street dust, let us not forget to stress the point that personal, intimate, contact, particularly in the family, affords our greatest tuberculosis infection danger. Let us remember too, that the trained tuberculosis subject who knows how to properly dispose of his sputum, and has a sufficiently aroused private, and personal, as well as an educated public health conscience to compel his taking proper care, should be free to come and go as he wills, without let or hindrance, as his danger to others lies where he can almost wholly control it.

When mankind fully appreciates the fact that three out of probably every four of the so-called delicate people we know, are delicate, because they have tubercle bacilli, active, or inactive, latent or concealed, in open or closed tissues, though most often unknown to themselves, then we may, and doubtless will, begin to arrive in perceptive visibility of the, as yet, delayed solution of the tuberculosis problem.

Surgical Significance of Hemorrhage From the Non-Pregnant Uterus.*

By J. F. Highsmith, M. D., F. A. C. S. Fayetteville, N. C.

At the present time, I must admit that I feel keenly the task of selecting a subject

*Read before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

that will be interesting and instructive to the members of this Society.

The Surgical Significance of Uterine Hemorrhage is an old story but, nevertheless one of great importance. If I sound the same note that you have often listened to I hope that my efforts will not be altogether in vain.

The Specialist in this particular branch of Surgery is daily burdened with the responsibility of these conditions and the importance of their being correctly diagnosed and in time. It is a fact that much has been written, more said and more accomplished in diseases of the pelvic organs than in almost any other branch of surgery.

Even a casual glance over recent literature indicates that the subject of uterine hemorrhage is so complex as to make practically impossible a comprehensive classification of cases. At the same time the subject is simple enough to be easily understood. Such confusion indicates ignorance of the underlying principles of menstruation, its anomalies and abnormalities.

In practice one meets hemorrhage from the non pregnant uterus during the three important epochs of a woman's life, puberty, the child bearing period and the menopause.

Whatever the time of life at which bleeding may occur, it may be said to depend on either local or constitutional causes.

Under constitutional causes, we may at present include those little understood forms of hemorrhage supposedly due to derangement of the function of secretion or secretions of the ovary and other ductless glands.

Other causes are chronic visceral diseases, such as heart, lungs, liver, and kidneys. A thorough examination of these organs should be made and the possibility of their derangement, being the cause ruled out, before one resorts to the popular and much abused instrument, the Curet. Curettage in these cases is of no permanent benefit, although a temporary relief may be experienced from the metrorrhagia and menorrhagia.

It might be interesting to mention that Whitehouse states that 20 per cent, of the women subjected to curettage receive no benefit whatever from the operation, a strong indication against the prevalent methods in diagnosis and treatment of uterine abnormalities.

Menorrhagia and metrorrhagia being only a local manifestation of a systemic disease, are treated by instituting the proper hygienic and therapeutic measures, local

treatment being necessary in a very few cases.

In some cases not either a local or constitutional condition can be demonstrated as the underlying cause and in such cases curettage usually gives absolute relief of the condition.

The curettings from such a case will usually show on microscopical examination the well known glandular hyperplasia. It is very probable that in a certain number of these cases the condition is the result of a mild infection of the endometrium. This is especially to be considered if the patient has leukorrhea. Every method of diagnosis should be exhausted including bacteriologic examination of the uterine cavity before the patient is classed as one of those suffering with, "Simple Endometritis."

Local causes of uterine hemorrhage include practically every form of disease which may occur in the pelvis. Infections of the uterus from gonorrhea or after puerperal sepsis, myoma, polypus and cancer, tears of the cervix, retro-displacement, tubal, broad ligament, tubo-ovarian and ovarian disease, chlorosis mitral lesions, hemophilia, and low calcium index of blood. Constipation is also included among the local causes for the reason that it produces uterine congestion by mechanical obstruction to free venous flow from the pelvis.

Whether both local and constitutional causes produce hemorrhage by setting up a so-called endometritis or by their action on the vasomotor or muscular mechanism of the uterus, I am unable to say. Such hypertrophy and hyperplasia of the endometrium is almost always demonstrable in these cases, but it is also often present when there is no menstrual abnormality, and occasionally in spite of the fact that there is free bleeding, atrophic instead of hypertrophic changes occur, whenever there is a demonstrable local cause for hemorrhage, such as laceration, displacement, tumors, etc. Treatment is simple and easily determined and indications for operation are obvious and the extent of the operation is determined by the extent of the disease. In all cases in which the uterus is not to be removed, curettage should always be performed as this hastens the return to normal of all the diseased tissues. Most of such easily recognized cases of bleeding from the uterus appear most frequently during the child bearing period and are often the direct result of parturition.

The most puzzling forms of hemorrhage occur about the time of puberty and the menopause, and it is at this time that hemorrhage is most resistant to treatment.

The onset of the menstrual cycle is a very important and critical period in a woman's life. It is just when the nervous system and bodily functions are easily and readily unbalanced and frequently permanently so, therefore all unnecessary examinations and far fetched forms of local treatment should be avoided. The habitual use of the daily douche should be condemned. Vaginal examinations never practiced, except in exceptionally puzzling and severe cases and should then be practiced only under an anaesthetic. Many times after exhausting every known means of diagnosis, it seems impossible to locate the definite cause of the bleeding, but if a careful and painstaking history and physical examination be made, the cause can undoubtedly be found, the removal of which will give very beneficial results with a cessation of abnormal bleeding.

In the so-called essential hemorrhage at puberty, rest in bed, tonics, proper hygienic measures, good food etc., constitute the best form of treatment. Let me say again, avoid the Curett and all local forms of treatment in these cases unless imperative.

HEMORRHAGE AT MENOPAUSE.

In this brief paper, no attempt has been made to summarize the heretofore expressed views of others, nor refute or corroborate statistics, but merely to express personal views obtained from personal observation. The true menopause may signify widely different ideas, not only to doctor and patient but to different doctors and even more to different women. Every medical man realizes that the period during which the menopause is in progress of establishment is a trying one. It comes at a time when every woman is inclined to the development of malignant growths and degenerations, with many and varied forms of nervous disorders, for this reason many women at this age look upon uterine bleeding of a more or less normal occurrence, and sad to admit yet it is true, some physicians pass it off by saying that it is natural and advise such patients that when they have passed their menopause it will cease.

It is at this stage of life that most depends upon early detection of malignant growths of the uterus and the immediate and thorough removal of diseased tissues. Therefore, I present this paper to sound a note of precaution to everyone to be on their guard and to never regard uterine hemorrhage from the age of thirty to sixty years of life as a trivial affair, but should always put forth every effort to properly and immediately diagnose the cause of the bleeding and insist upon it that the patient

receive the proper treatment at once, delay is dangerous. Hemorrhage at this time of life in practically every case means uterine carcinoma, unless other causes can be established.

Carcinoma of the cervix can easily be diagnosed by inspection and palpation. Uterine polypi can also be easily detected, but when all such local causes of hemorrhage are excluded, in the absence of constitutional cause, uterine carcinoma is almost certain. Let me say here, do not look upon hemorrhage as a diagnostic sign of malignant disease for it is not but to the contrary regard it as a prognostic sign. The slightest irregularity of the menstrual period should be looked upon with great suspicion. The normal menopause establishes itself in one of three ways. A gradual diminution in quantity, increasing intervals and a sudden cessation of the flow never to return.

If the menstrual functions should cease in any way abnormal to these principals, then a most thorough and painstaking history and examination should be made. All such patients should be made to thoroughly understand their condition and the probability of their developing malignant disease. If your first examination gives negative results, do not give your patient too much encouragement but explain to her the importance of repeated examinations at short intervals until she has well passed the menopause and all abnormalities of the menstrual functions have long subsided.

Hemorrhage occurring in an individual giving such a history is very significant of carcinoma. A thorough curettment of the uterus should be performed and the curettings subjected to thorough microscopical examination by an expert Pathologist, when carcinoma of the uterus can easily be detected where otherwise it was impossible. It is not unusual at this age for small fibroids of long standing, even so small at times as to make it impossible for either patient or physician to detect, yet malignant degenerative changes will occur giving rise to profuse uterine hemorrhage.

In conclusion, I would say that uterine hemorrhage from thirty to forty years of age is strongly indicative of uterine carcinoma. From forty to fifty years with the absence of other local or constitutional causes, it is almost always cancer and from fifty to sixty it is very uncommon but when present almost always points to malignant disease. We should educate the public and warn the physicians to be on their guard and not neglect investigation of abnormalities at the menopause and in every case of hemorrhage from the uterus at this age

curettage should be thorough and the curettings examined by an expert pathologist when the presence of carcinoma of the uterus can usually be diagnosed correctly. If as we anticipate, these cases come to us earlier for consultation as the result of popular education, more and more valuable will become the services of the expert pathologist. Many lives will be prolonged and the death rate from cancer greatly diminished.

Acute Gonorrhoeal Arthritis.*

By Samuel Lile, M. D., President Virginia State Medical Association, Lynchburg, Va.

In dealing with any phase of gonorrhoea I am not unmindful of the fact that one of the broadest subjects known to the profession is opened for discussion. Statistics show that 85 per cent. of men who live to be twenty-five years of age have had this disease. This is a very great proportion. Now many women must be afflicted in the same way for it is only by sexual contact that the disease is contracted, except in very rare instances, and it is a well known fact that many of our purest and best women contract it from their husbands after marriage. The husband having had a previous attack prior to wedlock and supposed himself cured.

These being facts and knowing how prevalent arthritis is, should we not always obtain an accurate history of each case, except in young children, to determine whether or not gonorrhoea plays a part? or is to be thought safe to call every case of arthritis, rheumatism and proceed to treat as such?

A carefully prepared history dealing with everybody in such cases might be the means of leading to a correct diagnosis and the saving of much suffering and many stiff joints.

The similarity of acute articular rheumatism and acute gonorrhoeal arthritis is so marked that only by close scrutiny can a differential diagnosis be made. Both are polyarticular and have swelling and pain with perhaps effusion into the joint or joints in the early stages. The one rarely terminates in ankylosis, the other often does, hence the vital importance of a correct early diagnosis.

Gonorrhoeal arthritis is almost always polyarticular, especially in the initial stages. The joint involvement following, usually within thirty days of a specific urethritis, accompanied by a chill, fever, swelling and

*Read before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

often effusion, either in a number or in a single joint, as sternoclavicular, temporo-maxillary, sacroiliac and intervertebral joints, or after persistence of the lesion in the primarily involved joint and the associated clinical symptoms with the history render the diagnosis obvious.

Even in the chronic Monarticular hydrarthrosis careful examination of the history and ect. will frequently show a slight multiple joint involvement.

Transient polyarticular arthritis without marked swelling later persisting in one or more joints is often seen.

Acute arthritis often heals with complete restoration of normal joint structure and function. But if the infection has been extensive, the joint cartilage may be partially destroyed or secondary connective tissue proliferation occur with resulting adhesions between the joint surfaces. Gonorrhoeal arthritis more often terminates in ankylosis than any other acute type of arthritis.

The occurrence of gonorrhoeal arthritis and tramma may sometimes be coincidental, in as much as the arthritis is most often found in certain joints, as the knee or ankle, which is particularly exposed to injury. A mild gonococemia may be present when tramma would produce a *locus minoris resistentiae* rendering the field fertile for the organisms already in the tissue to develop which might never have done so but for trammatism.

Examination of the articular fluid in the early stages will often show gonococci both in the leukocytes and lying free in the fluid, but as the case progresses the difficulties become progressively worse.

It is claimed by many that the proportion of cases in which gonococci can be obtained in culture from articular fluid ranges from 30 to 70 per cent. The more acute the case the larger per cent. of positive results. Culture methods often succeed where direct microscopical examinations fail.

Endocarditis is by no means an infrequent complication and is usually of an ulcerative type, but the best evidence goes to show that this condition of infection of the valves may heal, resulting in valvular deformities such as are often found in the so-called benign endocarditis following articular rheumatism.

Gonococcal pneumonia and pleurisy are not uncommon complications, and the latter is often attended with effusion. Albumenuria, enlargement of the spleen and organic lesions of the central nervous system may be manifested.

The presence of gonococci either as a

transient or often as a persistent invader the blood presents several features of interest in the study of gonococemia. Polymorphonuclear leukocytes is almost always pronounced.

Acute gonorrhoeal arthritis may simulate very closely acute articular rheumatism. The inflammation may subside rapidly in the joints first involved. This suggesting the migratory arthritis of rheumatism, the resemblance may be further increased by high irregular fever, mild angina, leukocytosis and absence of any signs of urethritis.

The chronic type especially if monarticular more nearly resembles tuberculous arthritis. The absence of demonstrable tuberculous foci elsewhere, the history of an old gonorrhoeal, and previous transitory arthritis or periostitis, the leukocytosis and the microscopical and culture examination of the frequent effusions in the joint, the specific serum reactions will assist in the diagnosis.

In the obscure cases of gonococcal arthritis bacterial examinations of the exudates and blood cultures will at times prove the associated gonococemia.

If still in doubt as to the infection being gonorrhoeal, make or have made an Autogenone Vaccine, give in small doses and if there be no rise of temperature for twenty-four hours increase the dose and so on continuing to increase until the reaction is developed. More than 5 C. C., of the autogenons vaccine might produce a reaction in anyone if used as the initial dose.

The history will usually aid materially in forming an opinion when the real search can be begun. We should not diagnose every arthritis, whether monarticular or polyarticular, as rheumatism.

The metastasis may come at any time during the acute stage of an attack of gonorrhoea, but Murphy says that it occurs between the 17 and 24 days from the beginning of the discharge in a vast majority of cases.

Treatment should begin at once and consists in enforced rest, excluding the use of opiates if possible—but such remedies as aspirin, diplosal, atophan and such, with which codein may be incorporated if necessary will usually quiet or lull the pain. If the discharge still persists urotropin internally and some good mild astringent infection should be used.

The bacterius are recommended by many, but in my hands have not been satisfactory, but the gonorrhoeal phylacogens have proved very beneficial, though with this remedy my experience is rather limited.

During the acute course of this infection the swelling will force the knee to a bent position, almost at right angle to the thigh, thus seeking the position of greatest relaxation and comfort. As nothing can be done towards manipulation of the joint at this stage it becomes practically immovable, and the tramma produced by repeated forced extension and flexion, even under an anesthetic, is detrimental to the subsequent usefulness of the joint, it should not be attempted except in the very beginning, as soon as the diagnosis is made, or until just after fever and pain have about disappeared, for trammatism of any inflamed joint aids the development of ankylosis rather than prevents it.

In the beginning, before any flexion has taken place, the knee, we take this joint as it is the most commonly involved, and put on Burk's extension, pulling from below the knee joint so as to separate the great articular surfaces of the tibia and femur, forming the knee joint, and in this way preventing any contact between these articulating surfaces, no adhesions will form, hence no ankylosis will follow. If flexion has taken place, as above described, an anesthetic should be administered, the joint straightened and the same extension made, using in either case from 12 to 24 pound weights. In the latter case the extension will hold the leg straight and there will be no further necessity for trammatism through manipulation. This treatment will usually give a perfect joint in three or four weeks. If this character of inflammation is encased in plaster paris as should be done in tubercular arthritis, as was formerly done in all these cases, ankylosis is almost sure to be the end result.

This type of arthritis should not be left to effect a cure, but something should be done at once.

We want to prevent the destruction of tissue first, then we should aspirate the fluid from the joint, should there be any, and there always will be if neglected even for a few days. After removing the fluid the next step is to neutralize the products of infection, and Murphy advises "The injection into the joint of from 5 to 15 C. C. of a solution of Formaldehyde and glycerine 2 per cent. which should be mixed at least 24 hours before using," as it takes this length of time for the mixture to become thoroughly incorporated—he also says 15 C. C. is preferable in cases of knee involvement.

If fluid reaccumulates aspirate whenever necessary, but do not repeat the formaldehyde and glycerine injection for 48 hours, it is rarely necessary to give more than two

of these injections. Recovery usual in three to four weeks if treatment is begun at once. If time is lost sufficient to destroy the joint no treatment will restore its actions, hence ankylosis results. These joints should not be drained.

Everybody possesses a greater or less power of resistance to disease and is expressed as vital force, vitality, vital energy or bodily resistance. This differs with each individual, but ordinarily it is sufficient to enable the organism to throw off the invading germ or germs and in this way maintain a state of health. The healthy physical man rarely or never takes on disease, his bodily resistance being sufficient to throw it off, and it is only when his natural vital forces have become weakened or broken down that disease obtains a foothold, and it is by removing the cause of infection and building up his vital forces is he able to be so strengthened as to again become normal. His vital resistance must be brought up to par.

Some years ago I had a patient sent to me by one of the leading physicians of my native city, he transferred the patient to me because he was going to Europe for his summer vacation. This physician, and I too, thought very likely the patient would die in a very short time.

Condition of patient. Patient had been in bed seven months with what was diagnosed rheumatism due to general syphilitic infection, hence was being given iodide and mercury. He had complete ankylosis of every joint in both lower extremities from hips to toes. On every boney prominence there was a bad sore, even on the spinous processes from the first dorsal down. His thighs were flexed at an angle of about 45 and the knees flexed on the thighs to a right angle, the ankles were both extended hence feet in complete extension.

I at once changed the diagnosis to gonorrhoeal arthritis. Good food with efficient dressings to the bed sores soon had him gaining satisfactorily. As soon as the bed sores were healed, under an anesthetic I manipulated and straightened his joints, put Burk's extension on both legs and in six months he was able to walk about on crutches with fairly good use of his legs, and at the expiration of a year was going where he pleased with the aid of an ordinary walking cane, but never were these joints normal. Had this patient's case been diagnosed and treated properly there would have been no occasion for such intense and prolonged suffering not for the general ankylosis in the lower extremities.

The proper treatment of these cases is

to prevent destruction of tissue, and the only way in which to do this is to make an early and correct diagnosis, and begin treatment early. The first thing to do, if the history shows a recent gonorrhoea, is to put the inflamed joints at rest and where possible with some form of extension—not fixation. In the knee or hip joints Burk's extension is the correct dressing and if in the knee the extension should be put below the joint so as to keep the heads of the bones forming the joint separated.

When the diagnosis has been clearly and correctly made and the proof shows the infection to be gonorrhoeal the effusion should be removed by aspiration and from 5 to 20 C. C. according to the size of the joint, solution of formaldehyde and glycerine injected into the joint at once. Should the effusion reaccumulate repeat the process. This should effect a permanent cure with a useful joint within three to four weeks.

Duodenal Ulcer.*

By J. Kennedy Corss, M. D., Newport News, Va.

The first report of a case of duodenal ulcer was made in the London *Medico Chirurgical Transactions* in 1817, and very little further mention was made until 1830, when five cases were reported. In the last few years a great amount of work has been done and written on this subject,—so thoroughly has it been covered by Sir Berkely Moynihan, the Mayos, and many other writers, that I do not presume to add anything new in this paper, but wish to emphasize certain points in the diagnosis and treatment, which have been noted in my general practice, and in the surgery of some of my own cases. All of my cases have come to me in the line of general practice and surgery, and have not been referred, and it is to Chronic Duodenal Ulcer in general practice that I shall devote this paper. It should not require an X-ray or Radiographer to diagnose or treat this condition.

There are many forms of duodenal ulcer, classified according to their cause,—Curlings Ulcer, as a complication of burns, especially of the abdomen,—the Uraemic Ulcer of Brights Disease, Tuberculous, and the malaena neonatorum,—and the acute and Chronic Duodenal Ulcer.

The diagnosis of Chronic Ulcer of the Duodenum should be easily and definitely made by any careful practitioner. Mr. Moynihan of Leeds, in one-hundred cases, was mistaken in the diagnosis in only three,

and they were gall-stones, and this without the aid of an X-ray. The patient may complain of indigestion for years, showing that the ulcer in its antecedent condition may begin early in life and continue for years with periods of repose. As a rule, it occurs between twenty-five and forty-five, and more frequently in men than in women. The onset is generally insidious, beginning with a sense of weight, oppression or distension in the epigastrium after eating. At first irregular as to time, but latter it becomes regular with pain from two to four or even six hours after eating, and relieved by taking food,—or generally, a sense of comfort immediately after a full meal. As a rule, when the pain becomes very severe, there is an eructation of bitter fluid or gas, but vomiting is rare. The interval between the taking of food and the onset of the pain is very remarkable. It is constant from day to day if the character and quantity of food remain the same. With my own cases, most of whom work in the Ship Yard and eat a hearty dinner at noon, they complain of faintness, sick stomach and pain about four o'clock in the afternoon. Many patients complain that the pain begins when they begin to feel hungry—the typical "hunger pain," which is generally relieved by taking food. They are generally worse in cold weather. The most characteristic feature for diagnosis is the periodicity of the symptoms, their recurrence from time to time in attacks, and their complete abeyance in the intervals. These periods of relief may be so pronounced that an organic condition is not considered possible, and it is attributed to hyperchloridia.

In the large majority of cases, physical examination of the abdomen reveals nothing abnormal, though there may be tenderness and rigidity of the right rectus. In late stages, after stenosis, there is gastric dilation.

Examination of the stomach contents is generally negative,—there may be excess of hydrochloric acid or diminished amount, though severe hyperchloridia is generally duodenal ulcer. Blood in the stomach is rare; occult blood in the stools is frequent,—free blood less frequent, and is a serious affair, more so than from a gastric ulcer.

Most writers give the most frequent differential diagnosis as from gall-stones. The pain of duodenal ulcer is methodical—gall-stones irregular. The pain of ulcer is generally bearable, and of gall-stones is intollerable, and is not relieved by food or alkalis, nor is it accompanied by chill, fever or sweat, and has not the character-

*Read before the recent meeting of the Tri-State Medical Association in Charleston, S. C.

istic catch in the breath. Gall-stone pain is referred to the right shoulder blade. If pain is early, within an hour or two after eating, the ulcer is in the stomach; if about two hours is probably near the pylorus.

In my own observation, the most frequent mistake of diagnosis has been between ulcer of stomach and of the duodenum. And it is in this regard that I consider a careful differential diagnosis should be made. How many patients have we all seen treated for "ulcer" by three to six weeks in bed on liquid diet, with the foot of the bed elevated, and after the first benefit of the rest has worn off and they return to regular diet, the return of all symptoms as severe as ever. Rest in bed on liquid diet will cure the large proportion of gastric ulcers, except those situated at the pylorus, and as a general rule, no duodenal ulcer will be cured by this treatment; though some few may recover spontaneously by improving the habits and surroundings of the case. Let me urge upon you all, the necessity of a differential diagnosis before subjecting a patient to the long tedious time in bed, the suffering and loss of strength, and above all, the loss of confidence in the medical profession in the treatment of "stomach troubles."

The greatest advance in the study of digestive disturbances has probably been made through the aid of the X-ray and bismuth, and in the study of this condition, carefully taken plates, taken at the different stages of digestion after a bismuth feeding, will be of interest and a help in studying the condition; but the physician who leaves his diagnosis to be made by the Radiographer, will meet with many disappointments, as there are few abdominal conditions where the X-ray can give as little positive information, not even excepting acute appendicitis. There is no more necessity for an X-ray picture to diagnose duodenal ulcer than there is to determine a chronic appendicitis, except for the psychic effect upon the patient.

In case 10 of my series, the plates of which you may see, was diagnosed as duodenal ulcer by physical examination. The report of the Radiographer was, that the stomach is enlarged and moderately ptosed, though it empties itself within the normal cycle of six hours; there is no evidence of gastric or duodenal ulcer or ileal kink. The caecum lies much lower than normal, while the ascending colon is completely ptosed, and one might infer that the hepatic ligaments are wanting. At operation there was a large duodenal ulcer, causing the gastric ptosis. The position of the

caecum and ascending colon was due to a chronic appendix fixed by a dense adhesion to the pelvic floor, and then drawing down and fixing the caecum, displacing with it the ascending colon. Immediately on freeing the appendix, the caecum and ascending colon returned to fairly good position. The operation was completed by a posterior gastro-enterostomy no loop with vertical anastomosis in the line of the oesophagus, and closure of the pylorus. For the associated ptosis she is wearing a Storm binder, and from being a complete invalid, is now eating everything, and attending to her household duties.

The treatment of chronic duodenal ulcer is surgical in practically all cases, and the question to be decided is in the choice of operation. Sir Arbuthnot Lane believes that practically all duodenal ulcers are the result of intestinal stasis or ileal kink, and that short circuit or colectomy are the operations of choice. (The London Practitioner February 1913.)

The majority of surgeons follow the more conservative teachings of Moynihan and the Mayos, and advise excision, resection or posterior gastro-enterostomy.

All of my cases have been treated by posterior gastro-jejunostomy, all but two being the vertical anastomosis. The method employed has been to first explore the abdomen, and locate the ulcer so that it could be seen and palpated,—then deliver the transverse colon and gentle tension upward and to the right will bring the proximal end of the jejunum into the field, and it is held by sponge forceps over gauze or by my assistant. The posterior wall of the stomach is delivered through an opening in the bloodless area of the mesocolon and then turned upward. Forceps are applied in the vertical axis in a line with the oesophagus, which is also the most dependent portion of the stomach ordinarily. The other blade is then applied to the jejunum as close to its origin as possible without undue tension. In placing this clamp, you must remember that the position of the stomach has been reversed from normal and the intestine must be rotated the same, so that on returning the stomach to its normal position, there will be no jejunal kink. By observing these few points, the result will be perpendicular no loop anastomosis,—the jejunum being attached at the most dependent portion, thus affording the best possible drainage, which is really the object of the operation. This has appealed to me more than the antiperistaltic operation of the Mayos.

There are some surgeons who anastomose the stomach at a point as near the

pylorus as possible. I have never done this operation, and cannot see any advantage to be gained, and much to be lost by it. It is not anatomically correct, as the first part of the jejunum naturally drops to the left of the spine and above the left kidney area. In duodenal ulcer there is generally ptosis of stomach and pylorus, and such an anastomosis would tend to increase this condition, while the other would relieve it. Last, but not least, it is added traumatism to the cancer area of the stomach, while the direct perpendicular one in the line of the oesophagus is practically outside the regular cancer area of the stomach.

There is much discussion as to the advisability of accluding the pylorus, and whether it remains accluded. I think it better to acclude the pylorus or duodenum if possible, by inverting the ulcer as advised by Moynihan, or by splitting the serous and muscular coats, drawing out the mucus lining and excising a section of this between two ligatures and burying the ends as in the appendix stump, which should permanently occlude the premeability of the gut at this point. Whether these or one of the many other methods are employed, they at least acclude the duodenum long enough for the new anastomosis to become well established.

For reasons not necessary to discuss here, I think it best always to remove the appendix. To go into details on this subject would enter the field of causation, whether infectious, or mechanical.

I have not kept a complete record of my cases, but of seventeen that I can find the records, the results are as follows:

SUMMARY.

Sex.—7 females—10 males.

Age.—1 was under 20 years; 1 was over 40 years; 15 between 24 and 39 years.

Operation.—2 were Mayo non-peristaltic; 15 were Moynihan vertical.

One was a large duodenal ulcer complicating the vomiting or pregnancy. This was a perfect result.

Cured 14 cases, varying from three months to several years,—seemed perfectly well, with no complications.

One case greatly benefitted.

One case had secondary hemorrhage. This was one of my early cases, and sutures were not placed close enough, nor drawn tight enough.

Post-operative vomiting occurred in four cases; two in which I did not acclude the pylorus or remove the appendix.

One case had obstinate constipation and severe pain some weeks after operation. In his case the appendix was not removed nor the pylorus closed,—no further trouble.

Obstruction of the duodenum with severe vomiting did not occur in any cases. (The treatment of this condition should be duodeno-jejunosomy.)

The two cases in which there was vomiting and regurgitant bile were those of the Mayo non-peristaltic anastomosis, without closure of the pylorus.

The only fatalities were the last two cases on my list, and these were apparently perfect results for a week, when suddenly there was severe vomiting, fecal in character, slight temperature, obstinate constipation and death in thirty-six hours, and within a few hours of each other. Several other surgical cases in the hospital developed a similar infection, and careful investigation disclosed a source of infection outside the operation itself.

In the two duodenal cases that proved fatal, a careful examination of the abdomen—one ante-mortem, and one post-mortem disclosed an obstruction of the bowel due to stitch abscess at lower end of the incision, with small gut and omentum in the infected mass. The area of duodenal ulcer and of the anastomosis were perfectly healed and free from any sign of infection, so that we may not attribute it to an autogenous intestinal infection.

Eliminating these two cases from the estimate of duodenal ulcer, I consider that posterior gastro-jejunosomy, with vertical anastomosis and occlusion of pylorus and appendectomy offer the best results up to the present time.

Fracture Dislocation of the Spine—Report of Case.*

By M. J. Payne, M. D., Staunton, Va.

Fractures and dislocations of the spine are very rare (DaCosta.)

The regions most liable to injury are the atlo-axial cervico-dorsal and dorso-lumbar. (Treves.)

The dislocation of a vertebra—without a fracture—is exceedingly rare, and occurs then only in the upper cervical region. The almost necessary association of a fracture with the dislocation has caused the term "Fracture-Dislocation" to be applied in the cases of spinal injuries, of the associated bony structures.

Cause.—Direct Force—(seldom) the lamina and spinous processes sustain the greater injury (as a rule) the force is applied—as in great weight falling, striking one on the back.

Fracture Dislocation, by indirect force,

*Read before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

as falling on the shoulders, buttocks, weight falling on the shoulders; however sudden forced flexion of the head or sudden forced or violent extension of the head or lateral flexion of the head are the commonest causes.

Pathology:—In all cases a fracture-sprain is almost a necessary accompaniment, that is, the ligaments are torn away from the bone, with small fragments of bone attached to the ligaments. The dislocated articular process over-rides the transverse process, and the lamina of the opposite side is necessarily fractured, the ligaments are torn away and carry fragments of bone.

The most important structure involved in this injury is the cord. If the cord escapes injury the outlook is vastly better, the disability less marked, and the treatment is much simpler; and the outcome of treatment is much more satisfactory. The injury to the cord may be slight, or the injury to the cord may be of such nature as to cause immediate death, or if life be prolonged, great, or at times hopeless total disability exists. The cord injury may at first appear trivial or slight, and yet after 24 hours extensive paralysis may develop. It is, at times, difficult to judge correctly of the extent of injury to the cord, inasmuch as the presence of dislocated parts or effusion may cause a temporary paralysis—which later may clear up and it is also entirely impossible to estimate the extent of cord injury, at times, owing to the fact that one cannot differentiate between paralysis caused by pressure and paralysis due to actual destruction of cord fibres—therefore, certain arbitrary rules will for the present be required.

In indirect force the cord is usually injured. In indirect force, the vertebrae may return at once to the normal position and no deformity be discovered, yet by reason of the cord injury the case will be found in a very grave or hopeless condition, or sudden death may result.

I am convinced that many cases of sudden deaths, unexplained, as to a definite cause, are due to a fracture-dislocation of the cervical spine, with cord injury. many cases of sudden deaths, unexplained, as to a definite cause, are due to a fracture-dislocation of the cervical spine, with cord injury.

A fracture-dislocation of the spine due to indirect force is commonly found in the dorso-lumbar region, however it may be found in the dorsal or cervical region.

The outcome of the case, therefore, depends largely upon the extent of the cord

injury and the ability to properly replace the injured structure in a normal position.

The expectant plan of treatment practiced, till only a few years back, was attended by a high immediate mortality, and in cases surviving the immediate effects of the injury, great disability, and often later by rather sudden death.

Following are some rules taken from DaCosta, Burrell, Murphy and elsewhere, and some not so taken:

A fracture-dislocation of the spine may be divided into two classes:

(A) With injury to the cord, (B) without injury to the cord.

2. It is not wise to decide what treatment to employ by statistics. (impossible)

3. It may be difficult to decide whether the cord is crushed, lacerated or compressed.

4. That only by a persistence of symptoms can a cord injury be diagnosed.

5. The cord may be permanently damaged, by continued pressure, which could have been removed by operative measures. Pressure for 24 to 36 hours probably will cause cord changes.

6. That the fracture-dislocation should be corrected as soon as diagnosed, in order to thereby prevent cord injury.

7. That if the cord is extensively injured the mortality will be high.

8. That while much uncertainty and doubt exists, yet certain parts of the cord (pyramidal tract) are capable of regenerative repair, to a limited extent.

9. That in case of a low sub-normal temperature—flaccid muscles, abolished reflexes lost sensations, a diagnose an irreparable cord injury must be made, and operative treatment is useless.

10. That the same degree of injury is attended by increased danger, as it approaches the brain—e. g.—injury at second cervical vertebrae is more dangerous to life than injury at sixth cervical vertebrae.

Paralysis appearing day or weeks after injury more than probably due to traumatic zonal inflammation, and are best treated by a non-operative plan.

That the late appearance of symptoms without a clear X-ray picture of displacement of bone—had best not be submitted to operative treatment.

That it is permissible to attempt reduction by manipulation if cord injury be not present, when the injury is in the cervical region.

In the cervical region reduction can usually be effected. In the dorsal region it is at times impossible to effect a perfect

replacement, even with the open operation.

That in cases presenting symptoms of injury to the cord the open operation is demanded.

That any open operation undertaken must be complete, and cannot be so considered unless the dura is opened.

On June 10th, 1912, I was asked to see Mr. Tom Crum of near Churchville, Va., with Dr. M. P. Jones of the same Village.

The following history was obtained: white, male, 44 years of age, married, farmer.

On June 8th, late in the afternoon while riding aside on horse back, leading another horse (by a line,) was jerked from his seat, falling heavily to the ground, striking against the shoulder and side of the head. He was seized with an intense pain in the neck and found his head in an unnatural position, which he was unable to overcome, or correct. He was able, however, to get up and walk to his home a distance of possibly 300 feet. He complained of great difficulty in swallowing, suffered intense pain in the neck, and could not sleep.

Physical Examination.

Large, robust, muscular man, florid complexion.

Head strongly inclined toward the left, thrown somewhat backward—and rotated toward the left probably about 25 to 30 degrees and rigidly fixed in this unnatural position. He complained of great difficulty in swallowing, and the act was not only painful, but exceedingly difficult. About opposite the fifth to seventh cervical vertebrae considerable tenderness was discovered. He complained of great pain which was aggravated by any attempt to move the head; likewise when his head was not supported. Examination of pharynx disclosed a bulging forward of the posterior wall of pharynx about opposite the body of the sixth cervical vertebra. There was observed a slight but distinct loss of sensation, likewise of motion and power in the thumb and index finger of the right hand. Kidneys, bladder and heart normal. Pulse quick about 110—of good quality. Respiration unaffected. Temperature slightly elevated 99 deg. F. Eye reflexes normal and alike. Pupils equal. Patella reflexes normal and alike. Triceps and brachial reflexes normal and alike. No Ankle clonus. Babinsky—normal. Motor sense, touch, temperature and position sense normal and unaffected. Insomnia very distressing. Considerable thirst from inability to take food and water. Clinical Diagnosis—Fracture-Dislocation of Sixth Cervical vertebra. Plaster dressing was put on and the patient sent to hospital for X-ray examina-

tion, which although non-positive, owing to machine, was sufficiently clear to confirm clinical diagnosis.

Treatment:—On June 12th, it was decided to make an effort at reduction by manipulation, and in the event reduction was not accomplished to do the open operation or a lamenectomy.

The patient was placed in a strong chair, in an upright position, and securely strapped to the chair. Ether anaesthesia to complete relaxation.

The steps of the procedure had been previously well worked out.

Standing behind and on an elevation, in order, to get all leverage possible. The principle of reduction being to exaggerate the deformity in order to unlock the bony parts; and then endeavor to retrace the course taken by the bony structure when the dislocation occurred. The manipulation must be gentle, yet powerful effort is required. Step one. The head was grasped firmly, and the lateral flexion, the extension and rotation of the head were all very gently and slightly increased. Step two. The extension and lateral flexion were held slightly exaggerated and the head was lifted upward in the line of displacement or of the present position, as far as possible, then the extension and lateral flexion and rotation were corrected in order named, and just while rotation of the head toward the normal or natural position was being made an audible distinct click or snap was heard by all the physicians, and nurses in the room and was distinctly felt and heard by the operator. The head assumed and remained in a natural position, without any further effort.

A large plaster dressing encasing the thorax, shoulders, neck and lower part of the head was then applied and the patient returned to bed.

The only post-operative symptom noticed was a rather fast pulse, which slowly returned to normal, and at this date is normal.

He remained in the Hospital ten days, and was then sent home. The plaster dressing was retained for eight weeks, largely on account of the fear of the patient.

The muscular power and sensation in the thumb and index finger of the right hand gradually returned, and now appear normal.

He has been in perfect health ever since, but cannot be induced to indulge in any extensive movements of the head, or assume the position existing at the time of the injury.

The Effect of Superstition Upon Our Lives.*

By F. Webb Griffith, A. M., M. D., Asheville, N. C.

Man is by nature a credulous animal. From time immemorial he has been fascinated by things which he could not understand, while the things with which he was familiar scarcely elicited a passing notice. Whether this be dignified by the name of faith or credulity, it plays a most important part in shaping our lives. History, sacred and profane, was written by human beings and gives us not only facts but facts colored and distorted by the superstitions of that particular period.

The magician, the soothsayer, the astrologer, the augur are still flourishing to an astonishing degree. We imagine we are a civilized race and point with a pitying smile to fantasies of former generations.

Superstition began with the human race and will probably flourish to the end of time. It may be defined as the belief in the production of effects other than by natural causes. Witchcraft includes the claim of those who profess to be able to produce these effects.

I will view the subject briefly, from a historical standpoint.

Under the old Roman law the magician was liable to be burned and his followers crucified. Even the accusation of sorcery was often used as a cloak to perpetrate the most violent torture.

Apparently the only exceptions to the practice of witchcraft were in cases of droughts, storms or diseases.

The Church took up the question even stronger than did the civil authorities. The Mosaic law was very strict. In Exodus it is stated "Thou shalt not suffer a witch to live." Again in Leviticus we find "Ye shall not eat anything with the blood; neither shall ye use enchantment," and a few verses later we find "Regard not them that have familiar spirits, neither seek after wizards, to be defiled by them."

In the 17th chapter of 2nd Kings we read "And they caused their sons and their daughters to pass through the fire, and used divination and enchantments, and sold them to do evil in the sight of the Lord, to provoke him to anger."

We find almost the exact words again in 2nd Chronicles, while in Malachi it is written "And I will come to you in judgment; and I will be a swift witness against the sorceress and against the adulteress."

We are told in the Acts of the Apostles

that there was a man named Simon who bewitched the people of Samaria. Also there was one, Elymas, a socerer, against whom Saul hurled the invective "O full of all subtlety and all mischief, thou child of devil, thou enemy of righteousness, wilt thou not cease to pervert the right ways of the Lord."

Then to use a slang expression Saul went him one better, for he is quoted as saying "And now behold the hand of the Lord is upon thee, and thou shalt be blind, not seeing for a season" "And immediately there fell on him a mist and a darkness; and he went about seeking some one to lead him by the hand."

Within the past few months there was introduced into the Legislature of one of the States, a bill to regulate the practice of fortune-telling, palmistry and allied schemes. Evidently human nature has not changed much in nineteen centuries.

As late as the beginning of the 17th century, the Church of England forbade the clergy from casting out devils by fasting and prayer except by special permission from the bishop.

In the reign of James 1st of England the following law was in force "If any person or persons shall use, practice or exercise any invocation or conjugation of any evil or wicked spirit, or shall consult, covenant with, entertain, employ, feed, or reward any evil or wicked spirit to or for any intent or purpose, or take up any dead man, woman or child out of his, her or their grave or any place where the dead body resteth, or the skin bones or any part of the dead person, to be employed or used in any manner of witchcraft, sorcery, charm or enchantment, whereby any person shall be killed, destroyed, wasted, consumed, pined, or lamed in his or her body or any part thereof, he shall be a felon, etc."

You are all familiar with the famous Salem outbreak in the latter part of the 17th century, in which nineteen persons were executed for witchcraft. Had Thomas Edison lived at that period, I fear his chances would have been about as good as a snow-ball's in a certain well-advertised torrid region.

Spiritualism, the antithesis of materialism, flourished greatly the latter part of the 19th century. In reality it is but a more dignified and cultured name for superstition.

Repeatedly the spiritualistic manifestations have been subjected to scientific investigation and have always been found to be groundless. There is in every case either an intentional or unintentional ele-

*Read before a gathering of physicians and laymen May, 1914.

ment of fraud. The attempt to place these phenomena upon a semi-scientific basis has been termed "modern spiritualism." It is but a feeble attempt to revive an old belief. Although apparently once more on the decline, it still has many professed adherents. If the Delphic oracle were in existence today, it could do a land-office business in most any of our large cities.

I dare say that most of us gathered here tonight consider ourselves as fairly representative men of average intelligence. Yet a careful inventory would disclose the startling fact that the trend of our lives has been tremendously influenced by superstition and false beliefs. As little children we are not told that we are born into the world, very flesh and blood of our parents, the product of a most wonderful and marvelous union of cellular elements; but our childish inquiries are dismissed with the statement that we were brought by the stork or the doctor. As we are rocked to sleep at night we are told of Little Red Riding-Hood, Jack and the Bean Stalk, the Cow that jumped over the moon, and other equally preposterous stories.

If we commit some childish indiscretion we are threatened with the dark room where bug-a-boos or goblins will get us. In this way a dread of the darkness is formed which it frequently takes years to overcome.

On Sunday we go to Sunday-school and are taught not only of the beautiful life of the Greatest of men, but with the same positiveness and without any distinction as to accuracy or authenticity, are made to believe that Mr. and Mrs. Adam actually lived, that the garden of Eden and the snake were realities, that there was no doubt that Noah built the ark, or that Jonah explored the internal anatomy of the whale.

With childish faith we accept all these stories along with the other things taught us, and then when later in life we discover that they are but myths or at the most founded on very slight and imperfect evidence we reject them, but sad to say the skepticism once started does not stop with these trivial and irrelevant things, but invades the most sacred precincts of religion.

To go back to our childhood how many of you ever played marbles without spitting on your taw for good luck; or what boy would be so rash as to go in bathing during "mad-dog days?"

Even today a creepy feeling comes over us when we hear a dog howl in the night and we unconsciously wonder which of our friends is going next. Only recently there

appeared in an Asheville paper an advertisement of a mad-stone, guaranteed to be absolutely reliable. Thirty years have passed since the immortal work of Pasteur on rabies and yet such an advertisement appears in a reputable paper.

What earthly reason can be given for regarding Friday as a day of bad luck? Yet thousands of persons of average intelligence will undertake nothing new on that day.

There may be some here tonight who would insist on leaving a house by the same door through which they entered; or who when walking with a friend would consider it bad luck to pass on the other side of a tree or telegraph pole. Who of this august body would be so rash as to kill a cat or break a mirror?

There is a wide-spread belief that the impressions of a pregnant woman will be conveyed to the child, or that if by chance the mother should see a deformed child, her own child at birth would be apt to have the same deformity. It is hard to see how such a preposterous superstition persists in the light of present day science.

Unfortunately our sacred religion is not immune; on the contrary it seems to be especially susceptible.

Religion is essentially based upon faith, and its devotees in their eagerness and enthusiasm frequently go beyond the bounds of all reason into the realm of superstition. As a firm and sincere believer in true religion I trust that anything I may say will not be misunderstood. The next time you happen to attend the funeral of some one dead of typhoid fever and hear the prayer, "Forasmuch as it has pleased Almighty God in His wise providence, to take out of this world the soul of our deceased brother, we therefore commit his body to the ground," think to yourself how much more appropriate it would be to pray, "Forasmuch as someone through ignorance, carelessness or neglect has scattered broadcast the fatal germs of typhoid fever and thus murdered this our brother whom Almighty God intended should serve a useful purpose on earth, we pray that his murderer may be forgiven and be made to see the error of his ways."

It is said that the prayer of a righteous man availeth much, but I don't believe the prayers of 50,000 righteous men would ever have accomplished what our city officials accomplished when they installed a good water supply.

Asheville boasts of the fact that she was the first city in the world to have a law prohibiting spitting on the side-walks, for fear of spreading tuberculosis, yet today in



D. A. STANTON, M. D., HIGH POINT, N. C.

the name of religion there gather on Sunday morning in our city, the tubercular and the non-tubercular and drink out of one cup.

By such remarks I am not casting a slur upon religion, God forbid, but simply upon the rank inconsistencies practiced in the name of religion. If the tubercle bacillus is contagious on Saturday it is contagious on Sunday, and if it is contagious on the drinking cup of a railroad train it is contagious upon the sacred communion cup. The Founder of the Christian religion never intended that human beings should be sacrificed or even jeopardized on the altar of sentimentality.

This may seem a digression from the subject, but what I wish to emphasize is that we are not only superstitious about little things but that it extends to the very foundation of our physical, moral and spiritual existence. One of the greatest blots upon our fair land today is the ignorant faith that humanity in general has in the curative effect of patent medicines. No greater cannibals ever lived than the present-day patent medicine men who thrive off the very blood of their credulous victims, sending thousands to premature graves in order that they may live in luxury. Superstition is born of ignorance and begets fear. As knowledge increases superstition decreases. They are as incompatible as day and night. About twenty-five years ago a few sincere and earnest scientific men were called together to direct the course of a newly founded university. They chose as their motto "*Veritas vos liberabit*," the truth shall make you free. They welcomed truth from any source, whether through the telescope or microscope, whether through nature or religion. And that university has flourished beyond all expectation.

It has been generally held that science and religion were diametrically opposed, and that a firm belief in one precluded a firm belief in the other. Science abhors the superstition which has crept into religion, but true science and true religion are traveling side by side, struggling for truth from a slightly different angle.

It will be a happy day when the cold facts of science are tempered with the mellowing influence of a religious faith; and religion, so susceptible to misinterpretation and so easily led into the false paths of superstition, shall lean more trustingly upon the guiding arm of science. Then, indeed, will ignorance, superstition and fear vanish from our lives like a night mare at the dawn of a beautiful day.

Dr. David A. Stanton.

Edited by Drs. D. W. and Ernest S. Bullock, Wilmington, N. C.

Dr. David A. Stanton, the subject of this sketch, was born May 24, 1859, in Randolph County, N. C., a few miles distant from the little town of Randleman. His parents were George F. and Ruhama J. Stanton. His father was a prosperous farmer and his early boyhood days were filled with the thousand interests that attend the lives of small boys reared on the farm. He was the fourth child of a family of six.

At the age of eight he entered the free school of his community, in which he continued for ten years. At eighteen he entered Pleasant Garden High School and a year later attended New Garden Boarding School, which is now Guilford College, at which school he finished his literary education. His work at school proved him to be a diligent and able student.

His school days finished, he entered the offices of Drs. Woolen & Long and began the study of medicine, his love for which was deeply ingrained and dated back to his earliest boyhood. This early training under two such excellent preceptors has been a marked factor in the great success that has attended Dr. Stanton's efforts in the professional field. When he had gleaned sufficiently from their store house he entered the medical department of the University of Vanderbilt at Nashville, Tenn., from which institution he was graduated in the Class of 1887, passed the State Board of Examiners the same year and joined the State Medical Society.

After his graduation, he began practicing his profession in the town of Randleman, where he first began the study, and seized the opportunity of a closer and a more practical acquaintance with the study which possessed the greatest fascination for him, devoting to it the interest and enthusiasm which have never failed him since. Athirst for larger fields he did not remain at Randleman for long, but soon located at Lexington, N. C., and two years later, in 1891, sought larger possibilities at High Point, N. C., where he has been for twenty-three years. During his career at High Point, he has done some hospital work at Richmond in 1894; Johns Hopkins in 1896, visited the Mayo Brothers in 1906 and in New York in 1912, specializing on surgery in all these courses except at Johns Hopkins he applied himself to general medicine.

As a physician Dr. Stanton has been

one of the foremost men of the State, at all times keeping abreast with the latest developments in the world of science and bringing these developments to his bedside work wherever practicable. The high position which he has attained in his profession, not only in his home town but throughout his State, attests his skill, his energy and his interest in his life work. One of his highest ambitions has always been to endeavor to make the medical profession better by reason of being a member of it.

In 1906 Dr. Stanton was elected secretary of the State Medical Society of North Carolina and served two terms (a period of six years), his incumbency being one of the most successful in the history of the medical society. His refusing to become a candidate for re-election was heard with regrets on all sides. In addition to being secretary of the State Medical Society for six years, he has been a delegate to the American Medical Association, has been a member of the Board of Councilors of the North Carolina State Society and is at present a member of the executive council of the Tri-State Medical Association of the Carolinas and Virginia. In addition to being surgeon to many of the industrial enterprises of his city, he has been surgeon to the Southern Railway for fourteen years.

Dr. Stanton has been as much as any one other individual an important factor in the remarkable growth of his chosen city. He was three times elected to the Board of City Council, served as mayor, served for eight years on the school board and for the past six years has been city physician.

As a financier, Dr. Stanton has been very successful in the real estate world, in the banking circles and among the manufacturers. At the present time he is a member of the directorate of several of the most important institutions of his city, among others the Commercial National Bank, the High Point Savings & Trust Company and the Perpetual Building & Loan Association.

Dr. Stanton is a member of the following fraternities: Masons, Knights of Pythias, I. O. O. F., Junior Order, and he passed through all the chairs of all these fraternities except the Masons.

He connected himself with the Stewart Methodist Episcopal Church, South, in 1891.

The honors conferred upon Dr. Stanton by his professional brethren have been many and the years of his practice have

been full of merit and he richly deserves his laurels.

Circumcision Before Christ—The Hebrews' Duty, the Gentiles' Privilege.

By J. W. Squires, M. D., Ft. Wayne, Ind.

Nineteen hundred and ten years before Christ; now thirty-eight hundred and twenty-five years ago; the Almighty appeared unto Abram, after which he was named Abraham, and ratified what He was prepared to institute, the rite of circumcision.

Circumcision seems to have been practiced for many years exclusively as a religious rite, and is to this day by the Hebrews.

It certainly met with popular favor in Persia, Egypt, and Arabia as at a later date it was practiced upon both sexes.

Does it not indeed seem probable that anatomical development, such as would render cleanliness impossible, was the original occasion for this decree?

Would it be presuming too much—would it require too great a stretch upon the imagination to suppose the foreskins of our fathers, of nearly four thousand years ago, were universally, or at least much more frequently, longer, tighter, contracted, and adherent, than among us?

That long and filth-retaining foreskins were not universal, even among the Gentiles, in that day and age of the world, we are given to know, by reading The Acts of the Apostles X. 28, "Ye know how that it is an unlawful thing for a man that is a Jew to keep company, or come unto one of another nation; but God hath showed me that I should not call any man common or unclean."

Thus showing conclusively that, although not a Jew, and consequently not circumcised, he still might be clean and Godly, and worthy of association with the chosen of God.

Whether it was originally instituted as a religious rite, without thought of sanitation, or whether the sanitary thought prompted it, for our purpose it matters not: it has been practiced by the Hebrews for nearly forty centuries, and evident it is, they are a strong sturdy people. Every surgeon, who has done any considerable practice among the Gentiles, is aware of the fact, that there is quite a field among us yet untouched by the surgeon's knife.

I think every surgeon who has been a careful observer among the Gentiles, will admit it is the height of wisdom, not to prescribe for a case of Acne Vulgaris until he has examined the penis.

In highly nervous, hysterical, illy nour-

ished boys and young men, to look well to the generative organs, in expectation of discovering the source of the pathological condition.

School tardiness in boys and young men, of whatever nature, can not always be laid at the feet of eye strain.

The lack of physical development and worldly ambition can not always be truthfully credited to enlarged and diseased tonsils, nor to the presence of adenoids.

Nervous and physical dwarfs can not always be charged to the sins of the parents.

Elongated and contracted foreskins and consequent irritated glands penis is sometimes responsible for nervous headaches, insomnia, drunkenness, morphine and cocaine habits; sexual excess, masturbation, involuntary emissions; frequent micturation, incontinence of urine, bed wetting; broken betrothals, unhappy marriages, jealous wives, social diseases (syphilis and gonorrhea) and divorces; grass widows, and grass widowers, and more than fatherless children.

Circumcision is the Hebrew's duty, and the Gentiles' opportunity.

'Tis the surgeon's duty to correct deformities, relieve suffering, and prolong life, and when he can do all this by so simple an operation as circumcision, he certainly is derelict of duty, who does not do it.

For my own part, I would just as soon advise a patient of mine, having periodical attacks of recurrent appendicitis, not to interfere surgically, but to trust to nature to right the wrong, as I would a young man having a long, contracted, and probably adherent fore skin; who probably, should he enter the bonds of wedlock, could not consummate the nuptial contract with satisfaction to either, until the surgeon's knife had done its whole duty.

Duodenal Ulcer.

The great majority of cases of gastric or duodenal ulcer will give some indication of their presence from the Roentgen ray examination, although at times, even a typical clinical case may yield no information, and a doubtful case may still remain doubtful. The points to be considered are, the clinical history, the tender spot, examination of the stomach contents and of the stool; increased peristalsis, spasm; the interval of time occupied by the stomach in emptying itself, retention and rarely antiperistalsis; the

evidences of adhesions or of cicatrization; the contour of the organ, the presence of diverticulum, penetrating ulcer orourglass. By carefully considering these points, we are usually able to venture a positive opinion, for or against ulcer.—Wilkins in The Canadian Medical Association Journal.

Traumatic Tetanus.

Gordon points out that Sawamura whose work is quite recent (1909) recognizes three kinds of tetanus: tetanus ascendens, tetanus descendens, and mixed tetanus. In tetanus ascendens the local muscles are affected first; next the tetanus spreads up the limb, then to the opposite limb, and finally up the trunk. This is the form commonest in experimental animals after subcutaneous or intramuscular injection. It is possible, however, that this type is not as rare in man as may be supposed. Tetanus descendens appears to be the commonest form in man and the horse. The muscles of the jaw and neck are first affected and then the disease spreads down the body. It is of graver significance than tetanus ascendens. In mixed tetanus both the above forms occur. The patient's chance of life depends upon (1) the incubation period, (2) the rapidity of onset and severity of spasms, and (3) the duration of the disease. Of these points (1) is the most important and (2) comes next. In the words of Kanthack, "fatality is in direct proportion to rapidity of onset, and inversely proportional to the duration of the disease." As long ago as 1891 Vaillard and Vincent showed that when freed of adhering toxin either by washing or by heat neither *B. tetani* nor its spores produced tetanus in animals by simple inoculation. They found, however, that the toxin-free bacillus or spore could produce the disease if they bruised the tissues locally by pinching them with a forceps, or if they simultaneously injected either lactic acid or another micro-organism such as *B. prodigiosus* or even its filtrate. These experiments are generally held to show the importance of bruising and also of a mixed infection in the genesis of tetanus. There is reason for doubting, however, if it is even now clearly realized how very important the associated bacteria may be. The author attributes an important role to the associated bacteria particularly in fatal cases. It seems probable that the explanation of the difference in prognosis according to the length of the incubation period is directly due to the associ-

ation of *B. tetani* with other virulent bacteria of which the most important is the anaerobic bacillus of Welch. While tetanus antitoxin has been a brilliant success when applied prophylactically, and its efficiency in this sense is beyond question, there is no doubt that up to the present its employment after the onset of tetanus has proved disappointing. The conclusion which Roux and Borrell came to as the result of their experiments was that "a few drops of tetanus antitoxin in the brain cure tetanus better than large quantities introduced into the blood under the skin. It is not sufficient to give the antitoxin; it must be introduced in the right manner. There is a point in the disease, however, beyond which antitoxin is of no avail in whatever fashion it is employed. The intracranial injection lengthens the period of efficacious treatment." The question as to how to deal with the anaerobic bacillus of Welch when it is also present has not yet been satisfactorily solved. At the present time the best thing to do seems to be to give the wound as much drainage, free air, and permanganate as possible.—London Lancet.

Persistent Erythema of an Erythromelagic Type.

G. N. Meachen reports the case of a girl aged 15 years whose ailment was diagnosed as erythema nodosum. For the last two and a half years she was said to have had pain in the legs, relieved by assuming the horizontal position, and the shins were of a purplish-red color. There was no history of actual joint pains, but eighteen months ago she had had pains in her arms like rheumatism. On examination the shins and calves of both legs were of a deep red color, and appeared somewhat tense. The upper and lower margins of these erythematous areas faded gradually into normal skin, and the feet were unaffected. There was no edema. No nodose lesions of any kind were present. The hands were in a condition of erythema perstans. The fingers had never become dead. The heart was normal. A blood count gave the following results: hemoglobin, 75 per cent.; red cells, 3,296,000; white cells, 7,600; small lymphocytes, 28 per cent.; large lymphocytes and transitionals, 7 per cent.; polymorphonuclears, 60 per cent.; eosinophiles, 3 per cent.; mast cells, 2 per cent.; no poikilocytosis; slight anisochromia. The blood coagulation time was seven and a quarter

minutes. Though presenting some of the features of erythromelalgia, the condition was not wholly typical of that affection.—Proceedings of the Royal Society of Medicine.

Convalescence.

The secret of prompt recovery from many a serious illness will be found in the prompt institution of tonic treatment. The resulting uplift is often all that is needed to enable the body to reestablish a nutritional balance and develop adequate resistance.

Thus, after the acute disease, such as typhoid fever, pneumonia, pleurisy, influenza, or those requiring surgical operations like appendicitis, intestinal ailments, utero-ovarian ailments and so on, the return to health often hinges on the thought and care given to restorative treatment. If a reconstructive like Gray's Glycerine Tonic Comp. is used, the result is rarely if ever in doubt. Unlike many remedies used to promote convalescence, Gray's does not whip up weakened forces. On the contrary, it aids and reinforces them by increasing the power and capacity of physiologic processes throughout the body. Thus the appetite is improved, digestive and absorptive functions are activated and the resulting improvement in cellular nutrition insures a notable gain in vitality and strength. Weakness and debility vanish as vitality and strength appear. This tells why "Gray's" is so useful and effective after the acute diseases.

An Advantageous Anodyne.

The principal feature of superiority in Papine (Battle) lies in its maximum of anodyne effect with a minimum of untoward results. The explanation of this fact is to be found in the purity of Papine's constituents, and the extreme care taken in its manufacture. For use in women and children Papine (Battle) has a thoroughly distinctive value.

A New Treatment for Tuberculous Ulcers.

Ottorino Marroni adds an additional case to the five reported by him before the Tuberculosis Congress in Rome, 1912, in which cases he demonstrated the value of the double salts of mercury and silver in combination with iodine, injected into the interior of tuberculous ulcers. This method of treatment is said to be a definite and a rapid one, being cited as a successful instance of chemo-therapy.—*Annali di Medicina Navale e Coloniale*.

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EDWARD C. REGISTER, M. D., EDITOR

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THE PROSTATE.

Among the most common and tormenting ills of old age, and frequently of middle life, is the enlargement and inflammation of the prostate gland. Frequently in old men it becomes malignant. The catheter, while often indispensable, increases inflammatory conditions, unless it is used very carefully, and a Nelaton at that. The smallest one should be used, when possible, but if the amount of mucous and blood choke it up, of course a large one is necessary. Where there is so much mucous, the bladder should be flushed with a hot sterile solution of boric acid. Cases will go on dribbling till the bladder becomes enormously distended. The viscus becomes distended to a certain point where the nerves are so obtunded that sensibility is lost. Cases occur sometimes where three quarts of decomposed urine are evacuated at one time. Hemorrhage into the bladder, with obstructive hypertrophy, is a grave trouble, and removal of the central lobe, which curtains the prostatic urethra, is absolutely necessary. There is no doubt but that in a majority of cases in old men, where they have been of long standing, the gland becomes scirrhused; and such condition being irremediable, death results soon. As a rule, however, it is the middle and not the lateral lobes which overlap the vesico-urethral orifice and so seriously obstructs the outflow of the urine.

Prostatic disease is slow and often insidious in its development. The victim realizes that it is much more difficult to micturate but he attributes it to the natural disability of age. Gradually the trouble becomes more serious. He has pain, a sense of weight in the pubic and peroneal region, and a tormenting and irresistible desire to empty the viscus. He gets only temporary relief. The urine becomes foetid, dark, weak coffee colored, and mixed with thick ropy mucous. Now he begins to relieve himself with a catheter and then gradually the "combat thickens."

The treatment, while not curative, can afford great relief and prolong life. Hyoscyamus, belladonna, alkaline solutions such as potassium citrates, dionin as an

anodyne; diuretic, alkaline mineral waters; the antiseptic urotrophin tablets, or cystogen-lithia tablets which contain formaldehyd, are excellent. Frequently a rectal suppository containing extract of hyoscyamus, extract of opii, ichthyol, and oil of theobromates inserted at bedtime produces good results.

GOOD HEALTH AND LONG LIFE.

The Human Body—Therapeutic Suggestions.

If, as pointed out by Sir Oliver Lodge and other eminent authorities, the electrons which go to make up the atoms and cells which compose our bodies, move in regular orbits and pursue an orderly course, it appears to me to follow as a logical conclusion that anything which interferes with that orderly movement or disturbs the electrical equilibrium of a group of atoms or cells, will cause disorder or as we term it Disease in that particular part. That this is true is proven by the fact that electricity, light, vibration and other similar agencies often in a short time relieve pain and cure functional diseases which had been intractable to old and well established methods of treatment. This is being done in a large number of cases and every year these valuable agencies are being more widely used and highly appreciated on account of the excellent results secured by their intelligent application. Of course they are agents that may do harm if improperly used, hence they should only be applied by the physician who has made a careful study of the subject, who is competent to decide what kind of diseases and what particular patients are suitable for their use, and who knows what particular kind of current or application is best suited to the individual case. The altogether too common custom of people buying a little battery, vibrator or other appliance without understanding anything about its proper use and applying it to all sorts of ailments not only does harm in many cases but the failure that they make casts disrepute on a most valuable method of treatment and prevents many sufferers from securing permanent relief which they could obtain by taking the right kind of treatment. If your watch needed repairing you would not take it to the blacksmith shop. The human body is infinitely more complicated than any watch, and the correction of its derangements requires far greater skill than is possessed by any watchmaker. Why then entrust its well being to the gratui-

tous advice of some well meaning but incompetent friend, neighbor or busy-body, to the brazen assurance of some sure cure travelling faker or the grasping greed of the patent medicine exploiter. Why would it not be better to go to the physician who after having received a broad general education and mental training, has spent years studying the structure, functions and diseases of the body and is devoting his life to finding out and applying the best methods for relieving or curing these diseases. Think About It.

**SHOULD THE CONSUMPTIVE
ABOUT TO BE TREATED BE
TOLD THE NAME OF
HIS DISEASE?"**

If any one of the public be asked, is consumption curable, the answer always is that it is incurable and sooner or later fatal. The course of the disease has been impressed on every one since their earliest recollection so that to them the question seems trivial and hardly needing an answer. When some one comprehends that he is a prey of the disease rarely is submission and fortitude found in the victim, rarely is a treatment, although curative, followed by the common man with determination and constancy. In some appears incredulity, in others despair, in some thoughts or acts of suicide, in others distrust or hate of the physician, or where means or opportunity allows the hospital treatment, the living in the free and open air, the exile treatment by voyage, climate or mountain is followed to the end. To cure any disease requires the following on the part of the sick of the essential directions of rest, diet and medicine. This presupposes confidence in the treatment and where rational a desire for health or recovery.

Where life is indifferent, when a disease is believed to be mortal, where a physician's ability to cure is not felt, where a treatment is held to be inefficient or harmful, to expect active co-operation from the patient is the part of youth and inexperience in medical practice. An indifferent patient is a thankless or a hostile one. A cure is assigned to anybody or to anything, never to the physician, an exitus infaustus always to him.

The practitioner's explanation to the sick should always be truthful, either fully and plainly stated or else partly, or in numerous diseases, all of those which are fatal or with a heavy mortality, not at all. For all sick fear these, and many whilst in health dread in secret terror this one or that as in his particular case

to be his end. Hence certain words as the common names of disease should never say when directly asked to name room. The commonest of these are, heart disease, Bright's disease, typhoid fever, pneumonia, consumption and cancer. Any of these words on the apprehensive ear of the sick are tactless, harmful, brutal.

As some inveterate critic may ask, what then should the truthful practitioner say even when directly asked to name such a malady. The reply is, he says nothing, he remains silent. This always is rewarded with the gratitude of the sick who remains constant and who understands the meaning of this silence far better than words or signs. The foregoing simple medical doctrine is assumed as proper by the laity and is that which is followed in practice. It is therefore with astonishment and some indignation that we read in books on the most recent treatment of consumption that a different policy and conduct is the right thing for the physician.

In Bandelier and Roepke, *Die Klinik der Tuberculose*, dritte auflage, 1914, the authors say: very important, even essential, is it to disclose to the tuberculous the nature of his malady. He must learn the truth unless hopelessly sick. Never will the tuberculous perceive the necessity of minute directions for treatment, the wholesome restraint in the regimen of his life unless the full gravity of his condition is explained to him.

The unlucky terms, "Apical catarrh," "weakness," "colds," must be totally given up where lung tuberculosis obtains. They lull the sick into a dangerous and retributive carelessness and inattention.

Rightly does Cornet call the suppression of the diagnosis for the purpose of sparing the patient agitation, a crime against the community.

Of course it is equally wrong to show the patient the terror of consumption. Most consumptives are impulsive, nervous weaklings who are not inclined to give up one of their harmful habits under the impression merely of lung weakness but who will rouse themselves from their psychic equipoise when consumption is indicated.

In our time the diagnosis tuberculosis is no longer a death sentence and the declaration of the possibility of a cure will remove many prevailing difficulties. Further details which may be imported to the patient depend upon the tact of the physician and upon the state of the disease as found, the character of the sick and upon his education.

In hopeless cases instead of medical candor, pious deception and consolation must appear for there truth were cruelty. On the other hand every curable patient must be informed at the first or subsequent consultation that his disease is serious, that he can be cured only by following medical instructions, a serious view of life, regular habits and personal co-operation.

A knowledge of his disease, the hope of recovery, and the conviction of the necessity of co-operation, shape hopefully the education of the tuberculous.

The education of the sick depends furthermore upon the gaining of confidence to the physician and to the medical art, which he retains in the good and bad days of the chronic course of the disease.

Bandelier and Roepke are the authors of several practical works on tuberculosis and the tuberculin treatment of the same. Their works are so popular that editions appear annually and translations into the greater modern languages have been made of them. They were favored with a preface by Dr. Robert Koch.

Other writers besides those quoted have expounded this same practice as right, proper and necessary to success in the treatment of pulmonary consumption. We however oppose every statement of these authors as unnecessary, harmful and cruel and as incompatible with the humane part of the medical art. In short the whole subject can be most aptly condemned by the following aphoristic quotation from Seneca:

Certain things must be cured with the sick in ignorance. The cause of dying to many has been to know their disease.

Quaedam enim ignorantibus aegris curanda sunt. Causa multis moriendi fuit, morbum suum nosse.

L. An. Seneca; De Brevitate Vitae. Cap. xviii.

THE KITCHEN GARDEN IN THERAPEUTICS.

Dionys touches up this topic so deftly and delicately that we must refrain from the endeavor to reproduce his witty skit, which appeared in "Revue des Sciences Medicales" for August, 1913. He intimates that instead of applying to the pharmacist for our supplies, we are to go to the greengrower. Vegetables are becoming the kings of the pharmacopoeia. Possibly this may be looked upon as a phase of physiotherapy for just now we are becoming physiotherapists, as we swear only by movement, air, heat, water and electricity. It is a veritable return to nature, mother beneficent and

infinitely helpful. "If the philosophers maintain, on the contrary, that the world that surrounds us shows itself indifferent if not aggressive toward us, it is that they have not grasped the end of the end of the medicine of the future. We are at the bottom only delayed disciples of Jean Jacques Rousseau. The legumes participate in this medical renewal."

Some content themselves in finding in these auxiliaries of great utility; as with Robin, who advises for the tuberculous especially a cuisine at once agreeable and affording some elements accessory to a cure. Thus we aid in remineralizing our clients by prescribing asparagus, rich in lime; beans, detainers of various salts; Brussels sprouts, which include magnesium; spinach for its iron; and pineapples for their iodine. But there is more and better to come.

We have the onion, dear to the school of Bordeaux. Brought forward by Coste, it fell into oblivion, except in the country. Mongour and others now preach its antiascitic virtues. Patients in great numbers have been presented to learned societies, to attest their cure. Under this regime the liquid disappears as if by magic; and cirrhotics while still cirrhotic resume the ordinary life. This is really better than repeated punctures, and gives results superior to those following auto-serotherapy, which has talked about itself quite enough.

The effect of the onion is diuretic, and one may think there are other means of arriving at that end. But these are less anodyne, and more difficult to manage than the white onion. Possibly the doses are not so large, for it is not merely a cure but a veritable gavage that is necessary. Onions raw, onions cooked, onion soup, onions fried—see what is almost the sole diet of the ascitic during the therapeutic period. Frankly, it is necessary to like onions, to submit to this culinary debauch, and the accentuated taste of the remedy hinders doubtlessly its popularity. Pity, for it is at least beautiful in its tempting simplicity.

Next comes the radish, as a remedy for biliary lithiasis. This is not the first vegetable to enjoy repute for the liver. The carrot claims priority and the carrots of Vichy reign despotically in the menus of that resort. Yet the most minute analyses leave us in ignorance as to the elements to which their value is due. One may conclude that the reputation is based on the similarity of color between plant and disease—a relic of the doctrine of signatures.

The radish does not appear to be recommended by reasons more serious. It is pure empiricism, or imitation of regional habits and popular treatment that induces Grumme to treat lithiastics by it. It appears that the results are simply marvellous. Take the radishes, black or white, scrape them carefully, express them in a cloth, saving all the juice and serve it fresh. Give a plenty; to be cured the patient must absorb 100 to 400 cubic centimeters of the juice. Continue for 15 to 20 days, progressively, and then gradually taper off the doses in the same manner. It is supposed that terrible consequences may follow its abrupt disuse.

As a result, the hepatic colics cease. It is not claimed that the stone disappears, but the pains stop, and that is what matters most to the patient. The cure should be repeated occasionally during the year. The treatment is ideal—simple, easy to follow, and does not make a very big hole in the patient's purse. It is also harmless.

However, the use of these vegetables is not new, and the pharmacopoeias of the 17th century we may find the carrot, onion and asparagus recommended for much the same affections as at present. Thus we originate little but copy endlessly.

REGENERATION.

Medical journals have contained reports of the repair of brain tissues and the genuine reproduction of brain cells to replace the original which had been destroyed. A family was murdered one night, their home being a lone place on a country road. The husband, wife, a son, and daughter slain with an axe while asleep. The motive was for money. Three negroes were hanged by a mob; but to my point. The daughter was struck by the blade of the axe, the cleavage being to the eyebrow. She lost considerable brain tissue but finally recovered, and is today the mother of a family. She seems to have recovered brain tissue.

Accounts have been given of the reproduction of liver tissue; and regeneration of the kidney and spleen, to some extent after parts have been removed. The blood is denominated "fluid tissue" and it, like other tissue, illustrates the process of regeneration. The red corpuscles and the leucocytes can be increased or diminished. We have examples of nature's method of substituting one organ for another so that health and life of the whole body might continue. For in-

stance, the spleen may compensate for the thyroid, and the perspiration for diuresis.

The modern view regarding the cell and its contents would largely help the student in studying the science of repair of lesions. The essential thing constituting a cell is the specialized protoplasm in the nucleus. The protoplasm is really the cell, and it is this property of protoplasm that makes regeneration of tissue possible, and renders operative surgery remedial.

STATE BOARDS AND THEIR DUTIES.

In our October number Dr. Roehr, one of our Florida colleagues, remarked that "Our State Health Board should be backed by every licentiate, thus enabling it to enforce preventive measures which are absolutely impossible today." Yes, but why limit the support to licentiates. Why not rather say, "by every individual residing in the State?"

Such general support is due and we firmly believe would be tendered to every state Board that appreciates clearly its duties and responsibilities, fulfils these as best it can, and makes the citizens know these facts to be facts. This applies to other states besides Florida.

The more simply the duties are apprehended and expressed, the more likely they are to be fulfilled, and to be understood by the people. In few words, the duties of the State Board are to protect the interests of the people. Add nothing to the bald statement.

In the licensing of medical practitioners the duty is likewise simple; the people must be protected against unqualified doctors, and the profession is to be protected by excluding all who are not likely to add to the dignity and standing of the profession. But this must be modified by the circumstances. Erect a very high standard, so high that nobody can reach it except a very few exceptional men, and there will be no qualified men to attend to the sick. This has always resulted in the appearance of unqualified and illegal or irregular practitioners; for the people must have doctors. The better way is to estimate the number that must be provided to attend properly to the people, and select from among the candidates enough of the best to fill the need.

Take our Old North State, with its population scattered over a wide expanse of territory, with few cities, roads so-so, and calculate how many square miles each doctor can cover and how many

persons he can properly attend. The question of how much attention each community will demand and pay for, comes into the calculation. If some districts are overcrowded with doctors who cannot all make a living, while in other places the men are exhausted by overwork, these may be equalized by diffusing the intelligence in both localities. If the whole State has enough physicians to care for its people, why admit more? The standard is degraded by poverty more than by any other single cause. The gaps made by disease, death or removals, can be filled from the candidates presenting. If the Board fills every such need it will have done the state and people a service indeed. Surplus applicants found qualified may be placed on a waiting list.

The closer this simple program is adhered to, the more general will be the support given by the public. The moment any Board begins to slip in personal considerations it commences to forfeit favor. It may proscribe candidates from some particular sect or school; try to enhance fees by making an artificial scarcity of doctors, or favor personal friends; and by that much forfeits the public confidence.

In the tests made upon candidates the rule should be to ascertain how each could fulfil the duties he would be expected to perform. If he is to be a general practitioner he need not be expected to demonstrate the steam engine or expand the binomial theorem; to give the process for the manufacture of acetanilid or tests applicable in a trial for poisoning. But he should show himself qualified to treat the diseases and injuries likely to come under his care, in a manner to be satisfactory in its results. He may even be excused for failure to recognize the difference between microscopic slides of tissues, if he can deliver a woman aseptically, prevent gonorrheal ophthalmia in the child, recognize a beginning typhoid fever or pneumonia, see pellagra in its early stages without waiting until all chance for a cure has past, know what to do when a tree falls and crushes a man's chest, operate on a strangulated hernia or an appendicitis before it is too late, bandage a fractured bone without causing gangrene, and do properly the things he will be called upon to do. The interest of the people forms the Alpha and the Omega of the duties.

The same rule applies to the work of the state sanitary authorities. We doubt if there is a more desirable, a more de-

lightful, duty for man than that of directing the sanitary work of such a community as is presented by any one of our southern states. We have here a ruling class of intelligence and refinement far above the average, and with it a large population that requires direction and control. Show by your work that you are his friend, and the southern negro is your grateful and devoted ally. Try to drive any man arbitrarily, without making him comprehend your reasons, and you have an opposition developing, that will defeat you, or necessitate an exertion totally unnecessary if good sense had ruled you.

The field is peculiarly attractive. There is room for the inculcation of the simplest, most elementary rules of hygiene; for the establishment of the most axiomatic principles. Take these as they come:

Don't eat or drink feces or urine. Hammer away at that until there is not an individual in the state who does not know it and act on it. Then—

Don't breathe the tubercle germs. Got that? Then—

Keep people ill with infections by themselves, until they can't infect other people. Once more—

Put disease dirt out of the reach of flies, and kill the flies.

That is enough for a start. Enforce these four propositions and you will have reduced the incidence of disease, and the mortality, lower than those of any other state in the Union. Then you may go ahead, and tell people how to keep flies from breeding, and in time how to breed children. But don't begin with the latter while neglecting all the primary lessons.

Editorial News Items.

Dr. Charles E. Ross.

In the death of Dr. Charles E. Ross at Morganton, N. C., March 31, 1915, the community has sustained a distinct loss. Dr. Ross was a native of Mecklenburg County, N. C., a graduate of the University of Maryland and for fifteen years an associate on the staff of the State Hospital for Insane at Morganton, N. C., retiring some ten years ago and assuming the duties of private practice in the same city where he had so long and faithfully served the State in caring with rare skill for the insane. He was a man of forceful character, a deacon in the Presbyterian Church, a devoted father, an upright citizen, and withal a man his friends and

the community at large will sadly miss. He leaves four children who are doubly bereaved in having lost their mother only a year prior to Dr. Ross's death. A member of county and state medical societies, a kindly considerate and a just man, he leaves his children a heritage of honor.

Dr. R. Sydney Cauthen.

In the death of Dr. R. Sydney Cauthen of Charlotte, N. C., which occurred at his home March 26, 1915, the ranks of the younger men of the medical profession in this State have lost an active tireless and exacting worker whose success in his chosen line was assured. Dr. Cauthen graduated at the Baltimore Medical College in 1902 and after an internship in a local hospital there engaged in general practice for a short time when he made a special study of ocular affections spending some time in Chicago, Ill., Baltimore, Md., and also doing extensive post-graduate work in Vienna. With this extensive technical training, a prepossessing appearance, a super degree of energy and enthusiasm, he engaged in special work as oculist in Charlotte, and rapidly assumed a position of respect by the profession and confidence from the public. He was a member of local, state, and national medical societies.

His death was due to an overstrained heart while hurrying to catch a street car a day or two previous.

The Mecklenburg County Medical Society in a body, attended his funeral, and many beautiful floral emblems were sent by organizations of the city.

The Governor of North Carolina has appointed the following physicians to positions;

Trustee State Hospital Insane, Raleigh; Dr. T. W. M. Long, Roanoke Rapids, N. C.

Trustee State Hospital Insane Morganton, N. C. Dr. L. N. Glenn, Gastonia, N. C.

Trustee State Hospital Insane, Goldsboro, N. C.; Dr. J. G. Anderson, Greene County, N. C., and Dr. J. G. Hoggard, Pender County, N. C.

Trustee State Normal College for Women Greensboro, N. C., Dr. T. S. McMullan, Hertford, N. C.

The Seventh District Clinical Congress, a subdivision of the work of the Seventh District Medical Society, which was organized five years ago by the then Councillor of the District, Dr. A. J. Crowell, Charlotte, N. C. was held in

Charlotte, March 8 and 9, with a goodly attendance of visitors present. Medical and surgical clinics of excellent character were given at the Charlotte Sanitarium, St. Peter's Hospital, The Mercy General Hospital, and at the Presbyterian Hospital. The occasion brought together a number of the best clinical workers of the district and the time was most profitably spent. A dutch supper was served Monday evening.

Dr. W. S. Rankin, Raleigh, N. C., Secretary State Board of Health of North Carolina, has been elected President of the Raleigh, N. C., Y. M. C. A.

The annual meeting of the Martin County Medical Society (N. C.) was held in Williamston, March 15, and the following officers elected for the ensuing year:

President—Dr. B. L. Long.

Vice-President—Dr. H. B. York.

Secretary-Treasurer—Dr. W. E. Warren.

Dr. Joseph Akerman, Wilmington, N. C., for the past year superintendent of the James Walker Memorial Hospital of that city, has retired and will resume private practice in Wilmington. He will be succeeded by Dr. Herbert A. Codington, Baltimore, Md. The hospital management have separated the administrative duties of the institution from the purely business side of the institution, and will place the latter under the control of Dr. R. B. Slocum of Wilmington.

The proposition of the trustees of the Atlanta Medical College, Ga., recently made to the trustees of Emory University, the new institution so munificently endowed last year by Mr. Asa Candler of Coca-Cola fame, is reported by the Atlanta press to have been accepted at a meeting on March 31. Liberal endowment it is stated will be afforded the medical school by this arrangement by which the school becomes the medical department of the great Methodist University being established in Atlanta, Ga.

Dr. Chas. O'H. Laughinghouse, Greenville, N. C., of the North Carolina State Board of Health, and Dr. Albert Anderson, Superintendent State Hospital for Insane, Raleigh, N. C., have been designated by Governor Craig as representatives to the National Board of Public Charities to convene in Baltimore, Md., May 12-15, 1915.

Dr. Everett A. Lockett, Winston-Salem, N. C., announces his retirement from general practice and will devote his entire attention to Surgery and consultations.

Dr. J. R. Gordon, Deputy State Registrar Vital Statistics for North Carolina, accompanied by a special clerical representative of the North Carolina State Board of Health is visiting a number of the counties of North Carolina checking up the vital statistics, and instituting prosecutions where wilful and persistent violations are found. The State Board of Health is determined on an honest enforcement of the law, and the few physicians and undertakers who are derelict in their duties will be prosecuted as their counties are inspected and the evidence accumulated.

Dr. L. N. Glenn, Gastonia, N. C., has been appointed assistant local surgeon Southern Railway.

Dr. J. A. Hartsell who has recently completed his term of hospital service in Philadelphia, has located in Concord, N. C., where he purposes doing general practice.

The County Board of Health, Pitt County, N. C., has elected Dr. M. T. Edgerton, Fremont, N. C., whole-time county health officer to begin work at once. Dr. Edgerton is a graduate of the University of Georgia and Johns Hopkins, and was selected from several strongly endorsed applicants. His special training and experience should enable him to soon rank as one of North Carolina's most capable local health officials.

"Dr. Brown," claiming to be an Indian medicine man was arrested in Rocky Mount, N. C., recently tried in the Recorder's court the first week of March and sentenced to six months on the county roads. An appeal bond of \$1,000.00 was furnished pending the decision of the superior court.

BOOK NOTICES.

The World's Social Evil. A Historical Review and Study of the Problems Relating to the Subject. By William Burgess, Author of "The Bible in Shakespeare," "The Religion of Ruskin," etc. Foreword by Dr. Graham Taylor. With Supplementary Chapter on A Constructive Policy by Judge Harry

Olson, Chief Justice, Municipal Court, Chicago and Other Important Appendices. Saul Brothers, Publishers, Chicago.

The author was prompted to write this book not only by the appeal made to his scholarly mind by the widely scattered data of the long war against vice but also by his personal experience on the field of action where he has aided materially in securing organized effort. The struggle against the social evil has spread very rapidly and widely and each line of aggressive effort has its own organization and publication. But to do their best in the intensive effort to meet concrete situations on local fields which absorbs them, they need to have their view extended to the whole field of conflict in order to realize the forces and resources involved on both sides. This volume meets the practical need of the rank and file for definition and discrimination, for retrospect and prospect, for surveys of situations and summaries of results for literature and laws, for critical estimates of methods and inspirational suggestion. It does this in a way sufficiently authentic to be of reference value, and yet in such a practical way that it is of immediate help to all on the firing lines of this great work.

Few are so well read as not to need to be informed or reminded of what these chapters record of the history of regulation and of the English contagious diseases acts. None can be so practical as not to be impressed with the economic phases of the situation here presented, not only in facts and figures, but in terms of human want and woe.

In the ebb and flow of the age-long conflict, the set of the tide is here shown to be toward the flood. Against all odds, the failure and doom of segregated, commercialized, police-protected vice is writ large not only in the handwriting on the wall in many nations, but also on the statute books and ordinances and in administrative regulations of a rapidly increasing number of states and cities. Still more hopeful is the fact that the silence and secrecy under which the social vice has thriven, both in its clandestine and public forms, are at last being penetrated by the light of authentic facts leading to a sane educational method in social hygiene.

The effect of this volume will be to give dignity to the war against vice and to show that it is worthy of the world's united effort.

Price, 1.50.

Principles of Hygiene: For Students, Physicians, and Health-Officers. By D. H. Bergey, M.D., First Assistant, Laboratory of Hygiene and Assistant Professor of Bacteriology, University of Pennsylvania. Fifth edition thoroughly revised. Octavo of 531 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1915. Cloth, \$3.00 net.

The subject of Hygiene is constantly undergoing great changes and it is necessary from time to time to revise the statements made but a few years back. In the present edition, the fifth, the author has tried to bring the subject matter up to date as far as possible and has succeeded admirably.

The reviewer has taken great pleasure in looking over the volume which is one that every physician ought to possess.

The volume is nicely and durably bound and contains numerous illustrations which add greatly to the value of the book.

The Germ-Cell Cycle in Animals. By Robert W. Hegner, Ph.D., Assistant Professor of Zoology in the University of Michigan. Author of "An Introduction to Zoology." New York: The Macmillan Company. 1914.

This volume will prove very interesting indeed to those interested in the problems of heredity, genetics, animal breeding, etc., and to others as well. Many of the most important recent additions to our knowledge of heredity have resulted from the study of the germ cells, especially those of animals.

The term "Germ-Cell Cycle" is meant to include all those phenomena concerned with the origin and history of the germ cells from one generation to the next.

A splendid bibliography has been appended which indicates the recent literature on this subject.

Price \$1.75.

Cancer, Its Cause and Treatment. By L. Duncan Bulkley, A.M., M.D., Senior Physician, the New York Skin and Cancer Hospital, etc. New York: Paul B. Hoeber, 1915. Price \$1.50.

The six lectures presented in this volume were prepared for and delivered to practicing physicians at the New York Skin and Cancer Hospital. The lectures give the author's own views and experience which have been strengthened by the vast amount of studying he has done on the subject. He opposes the course so often followed in regard to cancer

before operation, stating that in his experience during the last forty years he has rarely if ever found a patient with cancer who had received adequate and continuous medical care before operation with a view of rectifying the morbid growth. It is usually taken for granted that the malady is hopeless except as the new growth be removed by the knife. The instruction to the patient after the operation is often very deficient also, they are given no idea as to the care to be taken of themselves. This latter course the author is strongly opposed to.

The book is not long, containing only 229 pages, but it is to the point and well worth reading as the fight against cancer is every day growing stronger and men are becoming more and more interested.

Physicians' Prescription Register. Containing Eight Prescription Blanks on Each Page, Altogether 1000 Prescription Blanks. Published by Physicians' Drug News, 250 High St., Newark, N. J. Price \$1.50; postage 25 cents extra.

This book was gotten up as an aid to physicians in keeping a record of all their prescriptions. The blanks are numbered consecutively and this will enable anyone to find any prescription in a few minutes.

The book is durably bound and will be very convenient indeed for those physicians who wish to keep a memorandum of the date, name, etc. of all their prescriptions.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago, Volume IV. Number 1 (February, 1915). Octavo of 185 pages, 41 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

Contents.

Murphy's Clinical Talks on Surgical and General Diagnosis Intestinal Fistulas.—A Diagnostic Talk Followed by Four Cases with Comments. Fecal Fistula Following a Late Operation for Peri-appendiceal Abscess Burrowing Upward Behind the Cecum.—Excision and Cure. Fecal Fistula Following Peritonitis, Probably of Appendiceal Origin.—Excision of Fistula.—Separation of Adhesions.—Resection of Twelve Inches of Small Bowel.—Uneventful Recovery. Appendiceal Concretion Producing Ulceration, Perforation, and Acute Peritonitis.—Gangrene of Cecum.—Postopera-

tive Fecal Fistula.—Operative Relief.—Intestinal Fistula Following Late Injections.—Operation; Recovery.

The Relation of Cancer Research to the Clinical Aspects of Cancer, by Harvey R. Gaylord, M. D.

Aneurism of the Brachial Artery.—Endoaneurysmorrhaphy.

Division of the Brachial Plexus at the Level of the First Rib.—Suturing of the Divided Nerve-Trunks.

Mixed Round and Spindle-Cell Periosteal Sarcoma of the Right Femur.—Disarticulation at the Hip.

Series of Drawings Illustrating Dr. Murphy's Method of Bone Transplantation for Non-Union of the Tibia, Cases of which Have Already Been Reported in the Clinics.

Open Reduction of a Posterior Dislocation of the Spine at the Level of the Second Lumbar Vertebra.—Laminectomy.

Old Compound Fracture of the Right Malar Bone Resulting in Loss of the External Wall of the Orbit.—Outward Dislocation of the Eyeball.—Unsuccessful Paraffin Injection.—Successful Bone Transplantation.

Ununited Birth-Fracture of the Clavicle.—Ends Freshened and United with a Lane Plate After Inagination.

Carbuncle of the Arm.—Septicemia.—Metastatic Pleurisy.—Death.

Containing Cicatrices on Index Finger and Thumb.—Excision.—Plastic Operation.

Lacerated Wound of Thumb.—Emergency Case.

Malunion of a Fractured Femur with Great Angular Deformity.—Open Reduction and Plating.—Hemorrhagic Cyst at the Fracture Site.

A Talk on a Case of Gangrenous Appendicitis Operated the Previous Evening.

The Island of Make-Believe. By Blanche Elizabeth Wade, Author of "A Garden in Pink," "The Stained Glass Lady," etc. Illustrated by Emma Booth. The Page Company, Boston, MDCCCXIV. Price, \$1.50.

Children of various ages will enjoy reading this delightful story of several children who were stranded on the Reef Don't Know What To Do and carried away to Thinking Cap Castle in an airship by Mr. Do-Something who teaches them that they can do various things. He gives each a thinking cap which as time goes on fits better and becomes more invisible. The main purpose of the

book is to make children think for themselves when playing and to make play out of work.

Grown-up people, too, will find the book entertaining and teachers of primary grades will find it very useful.

Food Products. By Henry C. Sherman, Ph.D., Professor of Food Chemistry, Columbia University. Price \$2.25. New York: The Macmillan Company, 1914.

The people of today are awakening to the value of food purity and food economy yet the average person still knows very little about either. The present volume gives much valuable information for the general reader as well as for a professional reader and fills a vacancy which has long been felt.

The general plan of the book has been to devote a chapter to each important type of food covering (1) an account of its production and preparation for market with such brief statistical data as will indicate the relative economic importance of the industry; (2) the proximate composition and general food value; (3) questions of sanitation, inspection, and standards of purity; (4) special characteristics of composition, digestibility, nutritive value and place in the diet.

The book has a splendid index which of course adds considerably to its value and the tables of composition of the different foods are quite complete.

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., formerly Professor of Psychiatry, Columbia University. Eighth edition, revised. Octavo volume of 940 pages, with 350 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

Only a few material changes have been made in this edition. The subject of vertigo and its labyrinthine relations has received careful consideration under the discussion of the diseases of the vestibular portion of the eighth nerve. In the section on Infantile Paralysis much new matter has been added. The subject of Syphilis of the Nervous System has been revised and brought up to date, there having been so many discoveries in this branch. All through the book there are references to the new investigations of the spinal fluid, and the relation of spinal

fluid changes to the various organic diseases of the brain and spinal cord have been introduced. Altogether one hundred and fourteen sizable interpolations have been made and over two hundred minor alterations.

The book will, in all probability, continue to be as popular with teachers and practitioners as it has been in the past. It has been a pleasure to review it.

Some Neglected History of North Carolina—being an account of the Revolution of the Regulators and of the Battle of Alamance the first battle of the American Revolution by William Edward Fitch, M. D., First Lieut. Med. Res. Corps, U. S. A., Author "Some Things the Colony of North Carolina Did and Did First in the Founding of English Speaking America," "The Origin, Rise and Downfall of the 'State of Franklin' under her first and only Governor, John Sevier." Second edition, 12 mo., pp. 308, fully illustrated, handsome buckram bindings. Price, \$2.00, published by the Author, 355 West 145th Street, New York City.

Many who read this book of Dr. Fitch's will be surprised to learn of the numerous historic events in the early colonial history of North Carolina which hitherto have been unrecorded. It is a book that every lover of true history should read. The author's intimate knowledge of his subject and his store of historical facts and the judicial manner in which he handles disputed historical questions assures the reader that he knows what he is saying. Those who are not familiar with the Southern History will find the book quite fascinating. The author writes of it like a contemporary.

Life and Law. The Development and Exercise of the Sex Function, together with a Study of the Effect of Certain Natural and Human Laws, and a Consideration of the Hygiene of Sex. By Maude Glasgow, M. D. G. P. Putnam's Sons, New York and London. The Knickerbocker Press. 1914.

In this volume the author traces the natural history of sex from the lower animal forms through the more complex organisms to man. In this retrospect the importance of the function of sex is made clear, and the need of safeguarding it from the dangers incident to immoral living becomes manifest. To these dangers the author directs attention in the later chapters of the book, and points

out that both sound hygiene and a developed public conscience demand the eradication of the evil of prostitution, not only because of the appalling toll it takes of the lives of those who are degraded, but because of the very considerable harm it inflicts through the indirect communication of venereal diseases to innocent wives and children. The inadequate protection afforded women by the laws of many of our States is traced in this connection, and the direction in which an amelioration of social conditions may be looked for is pointed out.

The book is one of the very best on the sex question that we have today and is calculated to do a great deal of good.

Price \$1.25.

The Spell of Spain. By Keith Clark. Boston: The Page Company, MDC-CCCXIV. Price \$2.50.

This volume is beautifully bound and profusely illustrated with colored plates, illustrations from original drawings and special photographs. The author gives us a wonderful description of his trip through Spain with all the glamor of the place and its rich legendary lore. As he goes along he stops and chats with the people he meets and enjoys himself as only a friendly, appreciative stranger can in new and attractive surroundings. In his chats with the natives we get a splendid description of the life and custom of the people.

Worry and Nervousness or The Science of Self-Mastery. By William S. Sadler, M. D., Professor of Therapeutics, The Post-Graduate Medical School of Chicago; Director of the Chicago Institute of Physiologic Therapeutics; Fellow of the American Medical Association, etc. Illustrated. Chicago: A. C. McClurg & Company. 1914. Price \$1.50.

This volume deals mainly with the treatment and management of the various "nervous states," including a large group of similiar ailments such as alcoholism, migraine, chorea, etc. The methods described are those practiced in the daily management of these various disorders, whether in the clinic, the hospital, or in the private consulting room.

We all want to be well in as much as our happiness depends largely upon our health. We are helpers or dependents according to our health, and our "nerves" are the cause of many of our diseases. The message of the present volume is that there is a relief from these ills.

The author writes as he would talk to a patient, making clear the troubles, and presenting in a plain manner the way in which we are to be restored to health.

Animal Experimentation and Medical Progress. By William Williams Keen, M.D., LL.D., Professor Emeritus of Surgery, Jefferson Medical College, Philadelphia. With an introduction by Charles W. Eliot, LL.D., President Emeritus of Harvard University. Boston and New York: Houghton Mifflin Company. The Riverside Press, Cambridge. 1914. Price \$1.75.

Everyone interested in the discussion of animal experimentation and the opposition to it will welcome this book giving in a single volume the various contributions of Dr. Keen on this subject. He describes in his most interesting and convincing manner the new surgery of the last forty years and its extraordinary results and shows that the immense benefits conferred on the human race through modern surgery and serumtherapy are due to animal experimentation. Through the sacrifices of animal life, which is always made as painless as possible, surgeons and physicians have been able to save innumerable human lives which, without the help of the new surgery and therapy, would have been lost.

How many rabbits or guinea-pigs is it justifiable to incommode or kill in order to save the life of a child attacked by diphtheria? How many monkeys would a competent experimenter be justified in sacrificing in order to find a sure treatment for infantile paralysis? How many rats is it justifiable for men to kill in order to protect a city from an epidemic of bubonic plague. These are some of the questions to which Dr. Keen gives a reasonable answer.

He points out every clearly many times that the antivivisectionists would be the cruel people if they could have their way, cruel to their own kind; and that the surgeons and physiologists and the men who devote themselves to medical and surgical research are carrying on the most humane work now done in the world.

Pollyanna Grows up. By Eleanor H. Porter, Author of "Pollyanna: The Glad Book," "Miss Billy," etc. Illustrated by H. Weston Taylor. Boston: The Page Company, MDCCCXV. This is the second of the Glad books

by Eleanor Porter and it is just as interesting and entertaining as the first. Pollyanna, the same sweet, joyous, lovable child, only older, is still playing the "Glad Game" which it would be well for us all to play. The young as well as old will enjoy this book. The lesson taught is simple and wholesome.

Price \$1.25.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopaedics, Pathology, Dermatology, Otolaryngology, Hygiene, etc. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, with the collaboration of Chas. H. Mayo, M.D., Rochester; Sir Wm. Osler, Bart, M.D., F.R.S., Oxford; Frank Billings, M.D., Chicago; J. W. Ballantyne, M.D., Edinburgh; and others. With correspondents in Montreal, London, Paris, Berlin, Vienna, Leipzig, Brussels, and Geneva. Volume 1. Twenty-fifth series, 1915. Philadelphia and London: J. B. Lippincott Company.

The subjects discussed in the present volume are, Diagnosis and Treatment, Medicine, Surgery, Medical Problems, and Progress of Medicine During the Year 1914.

Dr. Chas. Mayo's and Dr. Osler's articles are of very great value and anyone should be especially interested in them.

Price of the book, \$2.00.

Progressive Medicine, A Quarterly Digest of the Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. March 1, 1915. Volume 1. Lea & Febiger: Philadelphia and New York. 1915. Price \$6.00 per annum.

The table of contents for this volume is as follows: Surgery of the Head and Neck, Charles H. Frazier, M.D. Surgery of the Thorax, Excluding Diseases of the Breast, George P. Miller, M.D. Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia, and In-

fluenza, John Ruhrah, M.D. Diseases of Children, Floyd M. Crandall, M.D. Rhinology and Laryngology, George B. Wood, M.D. Otology, Truman L. Saunders, M.D.

Optic Projection, Principles, Installation and the Use of the Magic Lantern Projection Microscope Reflecting Lantern Moving Picture Machine. Fully illustrated with plates and with over 400 text-figures. By Simon Henry Gage, Professor of Histology and Embryology, Emeritus, Cornell University and Henry Phelps Gage, Ph. D. Ithaca, New York: Comstock Publishing Company. 1914.

This book gives simple and explicit directions in regard to the principles of optic projection so that any intelligent person can understand them and succeed in all the fields of its study. The magic lantern has great and undeveloped possibilities for giving pleasure, arousing interest and kindling enthusiasm as it provides for the rapid demonstration of maps, diagrams and pictures of all kinds, the structure and development of animals and plants, many of the actual phenomena of physics and chemistry, and finally scenes from nature and from life, even with their natural motions and colors.

One of the main purposes the authors had in view in writing the book was to make the use of the lantern more general.

The authors have considered the Projection Apparatus of various forms and with various sources of light from a threefold standpoint:

(1) The standpoint of the actual user of the apparatus.

(2) The standpoint of the manufacturer.

(3) The standpoint of the student for whom an understanding of the principles involved is of fundamental importance.

All three standpoints are discussed fully, yet simply, and the book is one that should be especially interesting to the physician who is interested in projection apparatus.

Price \$3.00.

With Sabre and Scalpel. The autobiography of a soldier and surgeon. By John Allan Wyeth, M.D., LL.D. Illustrated. Harper & Brothers Publishers, New York and London. MCMXIV. Price \$3.00.

The author's purpose in writing this

book was to record from personal observation something of the social, economic, and political conditions which prevailed in the South before, during, and immediately after the Civil War.

He was himself born and reared in a section where the wealthy land owners and slave-owners, the poorer whites, and the negroes came together, and what he has written of the aristocracy of the old South at Huntsville would apply to hundreds of other communities of that period below "the Line."

Dr. Wyeth describes the interesting events of his stirring life, from his infancy in remotest Alabama, 1845, among forests in which Indians still lurked, to his position today in the foremost rank of active American surgeons. He has been farmer, woodsman, Confederate soldier, cotton-planter, cattle-buyer, medical student, river pilot, building contractor, land speculator, telegraph-operator, doctor, twice president of the New York Academy of Medicine, and founder of the New York Polyclinic. Dr. Wyeth's pictures of the South before the Civil War, of the life on the plantation, are valuable contributions to history. History, anecdote, biography of men, great and famous, illuminate the pages.

Abstracts of the Leading articles of the month.

Hemangio—Endothelio—Blastoma of the Stomach.—By Dr. J. Garland Sherrill and Dr. F. S. Graves, Louisville, Ky.—The authors make a brief report of a case of this very rare affection of the stomach occurring in a woman of thirty-one, with a family history negative except that one sister had carcinoma of the uterus. The patient's husband had acquired syphilis prior to his marriage but apparently recovered. She was the mother of one child and had two miscarriages.

In 1907 she fell striking her epigastrium against the corner of a table. Later she began to complain of loss of appetite, nausea, symptoms of indigestion and epagastric discomfort. Attacks occurred especially at night with regurgitation of food and eructations of salty material. Vomited blood once or twice. There was more or less constant pain in the abdomen, which was relieved by eating. Marked anemia developed with loss of flesh and a peculiar cachexia. When examined at this time she was tender over the region of the stomach and

a palpable thickening could be felt in the epigastrium. This mass moved up and down with respiration. At times it could not be felt. Blood examination at this time was negative to malaria, 3,500,000 red cells; 7000 leucocytes, no differential count being made; hemoglobin thirty per cent. She was given a test meal, but the stomach was empty thirty minutes afterward, therefore the examination was not satisfactory.

Diagnosis of gastric ulcer was made and patient was sent to the hospital with a view to bringing her into condition for operation, if relief did not follow treatment. Rest in bed, carefully selected diet and treatment of the ulcer brought prompt improvement. Subsequently this improvement seemed to be hastened by anti-syphilitic treatment.

She came under observation once or twice during the next five years, but was at no time under constant supervision. Her condition remained fair, but the mass persisted, sometimes palpable, sometimes not—always following the respiratory movements and also quite freely movable. Her husband informed us that about two years ago she had an attack at night, when she felt weak, yawning, with impaired vision and a slow feeble pulse, which he took to be the signs of internal hemorrhage. Within thirty-six hours the stools were black and blood was detected in them. Her anemia improved at times and then recurred. The lump in the abdomen seemed to enlarge and was more tender at her menstrual periods. Wasserman test negative. Blood examination: hemoglobing fifty per cent., red cells 4,500,000; leucocytes 6000; large lymphocytes eight per cent. small sixteen per cent. poly-morpho-nuclear seventy-two per cent., eosinophile three per cent. and myelocytes one per cent.

Diagnosis:—Gastric ulcer with a growth, probably a tumor, although the possibility of a floating kidney was considered.

Section performed October fifth, 1914. A reniform mass growing from the greater curvature of the stomach near the pylorus and covered by the greater omentum presented to view. This mass was mottled purplish in color and had a rather broad attachment to the stomach. It moved freely with that organ, having no other attachments. A small glandular enlargement was found in the omentum near the base of the tumor. A portion of the stomach about four inches in length along the convex border and two and one-half inches along the concave

border was removed, together with the mass and a portion of the upper part of the duodenum including the pylorus, and the gastroduodenostomy was completed in the usual manner. It was smooth on the surface, somewhat firm near its attachment to the stomach, without induration, and soft in consistency along its distal portion.

Upon examining the growth after its removal, three small openings in the mucous membrane were noted, one of which extended entirely through the gastric wall and communicated directly with the inside of the growth. Through this opening the little finger could readily be passed. The center of the growth seemed to be broken down but contained only delicate tissue and no appreciable fluid. It has not been our experience to find a condition of this kind existing with gastric ulcer.

On several occasions the adjacent stomach wall has been markedly thickened and indurated, but never has a distinct tumor growing from the stomach wall at the site of an ulcer been found. The relation of injury to the development of the growth as well as formation of ulcer is discussed. The authors believe that the ulcer was primary to the development of the growth. Following the operation the patient improved and says she feels wonderful relief, being able to eat anything without inconvenience.

The pathological report by Dr. Graves is as follows:

Specimen consists of pylorus with adjacent portions of stomach and duodenum, the piece of gastro-intestinal tract measuring 10 cm. in greatest length. In the mucous membrane of the stomach, about 2 cm. from the pylorus, are three small holes, largest 2 x 5 mm., with sloping sides and slightly thickened edges. This lies directly over a mass, ovoidal in form, 7 cm. in greatest diameter, soft, covered with a glistening serous membrane with one adhesion between the tumor mass and the external surface of the gut. The mass varies in color from pinkish gray to dark purple in spots. On section cut surface is moist, glistening, soft, homogeneous and, in the two-thirds adjacent to the cut, is pinkish gray with scattered spots of very dark red. The farther one-third is uneven, broken down and dark red.

Microscopical Description:—Different sections show that the tumor consists chiefly of more or less spindle-shaped cells with round or oval, rather faintly staining nuclei. Their cytoplasm is non-

granular and they do not have fibroglia fibrils. The cells in places are closely packed in masses. In other places they are arranged in strands or concentric whorling bundles separated by fibrous stroma. In some regions the tumor cells surround spaces containing erythrocytes. These lining cells are one or more layers thick and in them an occasional mitosis is seen. Some of these vascular spaces are fairly large, but most are small. This picture is varied by areas in which lumina containing erythrocytes occupy the greater portion of the field and are separated only by single strands of endothelial cells. A few of the vascular spaces are extensive, although lined with only a single layer of flat cells. The tumor is sharply circumscribed and is surmounted by gastric mucous membrane.

Diagnosis:—Hemagic-endothelial-blastoma.

Mellory, (in the Principles of Pathologic Histology, P. 370.) says: "They are often congenital and frequently, perhaps always, arise from abnormalities of the blood vessels, especially from vascular nevi. They occur most often in the skin and subcutaneous tissue, but may originate also in muscles, nerves, the liver, spleen, brain, bone marrow, etc. They are to be regarded on the whole as benign growths, although locally destructive because their manner of extension is by infiltration of surrounding tissues and by growths within and along blood vessels. Apparently but one case of metastasis is on record."

The following reports have been found in the literature:

Robert T. Morris, in a report upon "The Effect of X-ray Treatment in a Case of Endothelioma of the Stomach, Medical Record, April 16, 1910, p. 683, says: That some months ago he did a posterior gastroenterostomy to relieve pyloric obstruction in a case of supposed epithelioma. The growth was so extensive in character that a radical operation was deemed inadvisable, but a section was removed and submitted to Dr. Aspinwall Judd, who pronounced it an endothelioma. Under X-ray treatment, the growth had apparently disappeared entirely; the patient had gained about fifty pounds in weight and was now practically well, but may have a recurrence. Epithelioma and endothelioma, Dr. Morris says, simulate each other so closely that they are not to be distinguished except by the aid of the microscope, and if of the latter type the growth

was amenable to the X-ray treatment, it was a fact worth keeping in mind."

In an article published in the *Riforms Medica*, July 1, 1905, on Endothelioma of the Stomach Situated Near the Pylorus, (Abstracted in the *New York Medical Journal*, August 26, 1905, p. 452) Cignozzi summarizes the clinical features of endothelioma of the pyloric end of the stomach as follows: "The disease as a rule pursues a chronic course (six years in Brissaud's case, and ten years in Oettinger's case.) The symptoms of stenosis develop gradually until the clinical picture of pyloric obstruction (vomiting of food) without previous hematemesis or melena, comes into view. A smooth pyloric tumor which is movable and does not produce any metastasis nor any emaciation, such as occurs in cancer, is also characteristic of these tumors. Accurate diagnosis can only be made on the operating table."

The Treatment of Phthisis by Induced Pneumothorax.—Rundle (Liverpool Medico-Chirurgical Journal) tells us that twenty-one patients have received treatment by this method. The total number of injections given has been about 250. On no occasion has any complication of a serious character resulted from the operation. One patient was suffering from advanced disease of both lungs at the time of the first injection. The increased dyspnea resulting from the operation compelled the writer to abandon the treatment. Five patients with involvement of the greater part of one lung have been under treatment for from six to nine months. In these instances a cure is of course impossible, but it is noteworthy that in only one of them has there been any marked advancement in the physical signs since the beginning of the treatment. A fatal termination will eventually ensue, but the writer believes it to have been delayed. The improvement in this type of case has been accompanied by a very decided fall in the temperature range and volume of sputum. In one instance an obstinate and recurring hemoptysis appeared to be brought under control.

The remaining fifteen patients presented types of disease ranging in severity from the above to a moderate involvement of one lobe only. The extent of progress in these cases must always be largely a matter of opinion, but probably those who have followed the progress of the patients under treatment will agree that a greater and more sustained im-

provement has taken place than might have been expected as a result of treatment by other methods, not expecting the tuberculins.

The following are amongst the difficulties and dangers which may be met with:

The presence of adhesion making pneumothrax impossible. In such cases it is inadvisable to attempt to break down the adhesions by using pressure, although Saugman has recommended this. In one of the writer's cases nitrogen under pressure produced subdiaphragmatic emphysema which extended through the inguinal canal to the scrotum. During a second attempt the gas appeared along the great vessels of the neck, producing dysphagia by pressure upon the esophagus. If no free pleural space can be found, it is wiser to abandon the attempt.

Woodcock and others perform resection of the ribs in cases of this kind; the resulting collapse is then of course permanent. In view of the possibility of involvement of the other lung, it seems questionable whether one is justified in producing a final and total collapse of the affected lung. Evisceration of the lung is another expedient.

Faulty technique may produce pyopneumothorax, as in cases related by Brauer and Hammen. Cases of air embolism have been reported, but this danger should be obviated by a proper use of the manometer. Sudden death without obvious cause has been noted in more than one instance: this phenomenon is in keeping with that observed in rare instances as the result of such simple operations as tapping a hydrocele. As far as the writer is aware, no satisfactory explanation of this is forthcoming.

Dyspnea, with sometimes marked distress, follows the injection. In one of the writer's cases this condition was extreme and necessitated drawing off a portion of the gas with an aspirator.

By far the greatest obstacle to treatment has been, in the writer's experience, the pain incidental to the insertion of the needle. This pain is often most acute, it is not relieved by the use of the common local anodynes, and is at the maximum when the needle is piercing the pleura. Forlanini, in describing his method of simple puncture (the method the writer employs,) states that it causes the patient very little pain, and that one may with good grace go on to make a number of punctures if the first be unsuccessful. The writer has not met a patient who would submit to this, and

he believes that the proportion of individuals selected for treatment is restricted for this reason, rather than by consideration of the extent of the disease and clinical suitability. The fall of temperature and decrease in the amount of sputum, results which are fortunately within the observation of the patient, will often reconcile him to a prolonged course of treatment.

A local anesthetic to be of service must be deeply inserted, sufficiently to involve the pleura. This is in itself painful, and unfortunately deprives the patient of that sensation which is a very useful guide to the operator, when the needle is piercing the pleura.

In conclusion, the writer's feeling is that the induction of pneumothrax should not be undertaken as a routine treatment in—

First, very early stages with a favorable prognosis. In these the outlook is sufficiently good without subjecting the individual to the distress of a decidedly painful operation.

Secondly, very advanced cases, with involvement of both lungs. Here the writer believes that the additional dyspnea resulting from the lung collapse may materially hasten the end.

On the other hand, the writer is very strongly of the opinion that nocase of phthisis of moderate severity should be allowed to progress to a fatal termination without a trial of this measure. By a case of moderate severity he means one of that type so familiar to us all, where, although the involvement of the lung is partial, and unilateral, there is a persistent daily pyrexia, with perhaps increasing emaciation, anorexia, copious sputum, and loss of weight. When a patient of this class has had the advantage of sanatorium treatment, without improvement, then the writer believes he is justified in boldly placing the treatment by artificial pneumothorax before his patient, as offering probably the only chance of arrest.

Antigono-coccic Serotherapy and Vaccino-therapy.—Gajoux (Arch. mens. d'obst. et de gyn.) reviews the work that has been done in reference to the use of vaccines and sera in the treatment of gonorrhea in gynecology and obstetrics. One of the difficulties in estimating the value of such treatment is that we are often unable to find the gonococcus in chronic cases of metritis, salpingitis, etc., while clinical manifestations make us sure that this is the true origin of the

trouble. Also in women frequently the disease takes on an insidious form, with few manifestations beyond an increase of discharge, which is considered natural. To meet these conditions serotherapy was attempted. To make an effective serum two conditions must be satisfied: (1) we must obtain pure cultures of the germ; (2) we must obtain by inoculation an experimental gonorrhea in a laboratory animal which may be immunized by an antigonococcic serum. Neither of these conditions can be fulfilled. Antigonococcic sera do not appear to have a true specific action. This method of treatment being unsatisfactory, it has been attempted to treat gonorrhea by vaccines of various kinds. These may be stock or autogenous vaccines. The mode of application is by a simple hypodermic injection into the subcutaneous cellular tissue under aseptic precautions. Wright considered that we might make a diagnosis of gonorrhea by injections of vaccines, by the local and genital reactions obtained. The general reaction occurs within five to six hours after the vaccine is applied. Certain authors use an intradermal reaction for the same purpose. This reaction will not occur in tuberculous or streptococcic annexitis. But neither vaginitis, nor urethritis reacts in this way, and they are not influenced by the use of vaccines. Although some favorable results have been obtained by this form of treatment it has on the whole been unsatisfactory. On the other hand, we get excellent results in the vulvovaginitis of little girls, in whom the tissues are more fragile and the reaction very violent. Here the germs are more accessible to the vaccines because they are confined in a closed cavity, so to speak. In gonorrheal annexitis especially good results have been obtained by the use of vaccines. He gives these conclusions: Antigonorrheal vaccines have not fulfilled their promise; they have no prophylactic action, and their curative action in obstetrical and gynecological gonorrhea is seen only in certain of their complication. New researches may give better results.

The Treatment of Rigg's Disease.—

Bass, and Johns (New Orleans Medical and Surgical Journal.) Remember that they are most numerous in the bottom of the lesion. A little material is removed with a suitable instrument, diluted on a slide with a little salt solution, saliva or water. A cover glass is placed on the di-

luted material, which should be examined promptly with the high dry lens of the ordinary microscope. By careful search amebae are found, showing the characteristic ameboid motion. The amebae vary in size from about that of a leucocyte to about three or four times this size. No contractile vacuole is recognized, but nutritive particles, more refractile and more prominent in appearance, are observed. The ectosarc is quite clear and is well differentiated from the endosarc. These amebae are easily demonstrated in stained specimens. A good method is to make a thin spread of the scrapings and pus from the bottom of the lesion on a slide, allow to air dry, fix with heat and stain with carbol-fuchsin about one-fourth minute, wash, stain with Loeffler's methylene blue about one-half minute, wash, dry, and examine. The amebae are well stained by this method, and show their inclusions of tissue or cell remains, indicating pathogenicity. They have been unable to demonstrate that these amebae take up bacteria, though they sometimes appear to do so.

The action of emetine in amebic dysentery is very prompt, striking and specific. Usually the entameba cannot be found in the discharge after twenty-four to forty-eight hours of treatment, and the bloody mucous stools give place to normal formed stools in three or four days. There is considerable tendency to relapse after the treatment has been discontinued for a time, but no doubt a considerable number of "relapses" are, in fact, re-infections.

Whenever a patient has advanced Rigg's disease in one or more teeth the disease also exists around and between many of the other teeth. The interdental tissue is often soft, spongy, and bleeds readily. Often simply sucking the teeth causes bleeding. Careful examination reveals active motile amebae present.

The doses of emetine experimented with have been from one-half to one grain. Only one dose was given in a day. Several cases have been given a dose daily for several days. Others were given one or more doses until the amebae disappeared, after which an interval was allowed to determine how long it would be before they would return, or what other results could be observed. In several instances no amebae could be found the next day after emetine had been given on two successive days. In no case have we been able to find amebae

the next day after emetine had been given on three successive days.

On account of the wide distribution of this amebæ in nature and the character of the lesions of the disease, they do not think it very likely that bad cases of pyorrhea alveolaris will be permanently disinfected by a few doses of emetine given during a few days. The chances of reinfection are so great and the damaged gum, alveolar and tooth structure offer such favorable soil that it must surely be necessary to continue the specific treatment until Nature has had time to fully heal the disease. The length of time necessary for this will no doubt depend upon many factors. Healing and repair of diseased bone is always slow. Whenever the disease involves only the gum, and has not reached the bone (alveolar structure,) the length of time necessary for the gum to heal will probably not exceed a week.

Rapid Relief in Acute Lumbago by Manipulation and Active Movement.—Haig (British Medical Journal) gives his method of treatment as follows:

It consists of (1) deep thumbing of the lumbar muscles, in process of which a painful area is usually found either in the middle line or to one or other side; (2) fixing the part of the vertebral column below this painful region by firm pressure of the thumb on each side of the spine; and (3) making the patient perform movements of flexion, acute dorsiflexion, lateral flexion, and rotation. The result is cure of the attack of lumbago, inasmuch as the patient is able to at once return to his work, and in no case did the writer have to repeat the process.

Among the many remedies suggested by authorities on lumbago, remedies so varied as to include purgatives, diuretics, diaphoresis, hot baths, Turkish baths, warm packs, fomentation, hot ironing, iodides, iodine, guaiacum and sulphur, nux vomica in large doses, hypodermics of morphine or cocaine, counter-irritation by cauterly or blisters, electricity with massage, acupuncture and porous plasters, the writer only finds two suggestions as to movements. Romer advocates in traumatic lumbago the stretching of the contracted muscles and rupture of the adhesions by forcible movements executed under chloroform. And Chalmers Watson, in the *Encyclopedia of Medicine*, says: "To those who cannot readily obtain the requisite amount of active exercise and fresh air desirable it is advisable to recommend the daily

performance of two or three studied muscular movements—movements calculated to bring into play those muscles whose functions through non-use are being abused." Obviously these writers are referring to chronic cases. The writer's method is, he thinks, better, inasmuch as it cures the condition in the acute stage, and prevents it from becoming chronic.

The Treatment of Tetanus by Serum and Chloretone.—The West London Medical Journal says that a prophylactic dose of tetanus antitoxin is now becoming the routine treatment in all cases of wounds where there is risk of dirt contamination, and in consequence the number of cases of tetanus at the front are said to be steadily diminishing. When, however, tetanus has supervened, chloretone has been found to be one of the most useful drugs for allaying muscular spasm and so giving time for the administration of serum and other surgical procedures. Chloretone has no effect on the toxin, nor will it break up the combination between the nerve centers and the toxin; it simply controls the muscular spasm.

It is best given as an enema: 60 gr. of chloretone dissolved in warm olive-oil and repeated at such intervals as are indicated by an increase in muscular rigidity. After each injection a marked decrease in the trismus results, which makes it possible for the patient to take ample nourishment throughout the course of the disease.

The serum is given in doses of 100 Cc., repeated as often as necessary.

Glycerin in Bromidrosis.—Bernians, in *The London Lancet*, says that bromidrosis, or offensive sweating, is usually limited to the soles of the feet and occurs most frequently during the hot months of the year, and that moreover it is highly resistant to treatment. In severe cases there is usually tenderness of the soles, and abrasions of blisters form readily. Benians has treated five cases, three of a mild type, associated with warmweather. These were completely relieved, whilst the treatment lasted, but relapsed when it was discontinued. The other two were in boys of fourteen and were of a severe type. The condition had persisted for some months in spite of energetic measures taken to insure cleanliness and despite the continued application of drying and disinfectant powders. In both there were blisters and abrasions, and in both the

condition was completely cured in the course of three days by the application of glycerin well spread over the soles and toes before the socks were put on, this being repeated each morning.

Internal Hydrocephalus.—Dandy and Blackfan (Beitrage zur Klinische Chirurgie) say that this condition is produced experimentally in the dog by placing an obstruction in the aqueduct of Sylvius. It also occurs when the aqueduct of Sylvius is obstructed, in spite of previous extirpation of the choroid plexus from both lateral ventricles, though this latter procedure changes considerably the grade of the hydrocephalus. Their experiments show that cerebrospinal fluid is formed in the ventricles, that it is formed somewhat more rapidly than it can be resorbed, and that the aqueduct of Sylvius is absolutely necessary to carrying off the excess. Internal hydrocephalus can also originate through experimental ligation of the vena magna Galeni near their origin. If the ligature is placed more distally, or if the right sinus alone is ligated, hydrocephalus does not occur because of the activity of the collateral circulation.

The cerebrospinal fluid is produced chiefly by the choroid plexus, apparently as much through filtration as through secretion. Increase in the cerebrospinal fluid is caused by general venous congestion, as through temporary compression of the jugular vein, and this increase is stopped when the congestion is relieved through the collateral circulation. Medicines change the rate of formation of the cerebrospinal flow only to a slight extent! pilocarpine causes a slight acceleration. The structures which produce the fluid possess a marked impermeability; of the different substances soluble in the blood very little passes over into the cerebrospinal fluid. The cerebrospinal fluid is better protected against substances contained in the blood than either the peritoneal, pleural, or pericardial fluids. There is a constant and rapid formation and resorption of the cerebrospinal fluid; the entire quantity renews itself in from eight to twenty-one hours. The lymph vessels play only a subordinate role in the resorption of this fluid, it being resorbed directly into the blood. The entire subarachnoid space serves for this resorption, which is a diffuse process and does not depend upon differentiated structures such as the Pacchionion bodies or the venous sinuses. That no stomata are present is shown by the fact that

bacteria do not easily pass into the blood from the subarachnoid space. There is almost no resorption from the ventricle itself. The maintenance of the equilibrium between the formation and the resorption of the cerebrospinal fluid necessitates a communication between the ventricles and the subarachnoid space. If phenolsulphonephthalein is injected into the subarachnoid space, it passes in a short time into the lateral ventricles, proving that there are no valves in the openings. The communication is established by means of the formation of Magendie and Luschka through the fourth ventricle. If there is an obstruction in the aqueduct of Sylvius this passage, of phenolsulphonephthalein does not occur, showing that there are no foramina of Mierzejewski and Bichat. Bacteria placed in the subarachnoid space without any pressure, and evenly distributed after a short time throughout the entire spinal and cerebrospinal arachnoid space. For the assumption of a current toward the venous sinus we have no proof. The bacteria distribute themselves along the olfactory and the optic nerve, over the Gasserian ganglion, and for a short distance along the acoustic nerve, but not along the remaining cerebral or spinal nerves.

Hydrocephalus internus is divided anatomically into two subdivisions, depending upon whether the communication between the ventricles and the subarachnoid space is open or closed.

In seven patients with hydrocephalus it was afterwards found that this communication was absent. In each one of these seven cases resorption was practically absent in the ventricles, but was active in the subarachnoid space. The internal hydrocephalus was due to the hindrance to the flow of the fluid from the ventricles. Four cases of internal hydrocephalus were investigated in which communication was present between the ventricles and the subarachnoid space; in these the resorption from the subarachnoid space was slight. Meningitis was the cause of the disease in two cases of the obstructive type and two cases of the communicating type. The apparent cause for the origin of internal hydrocephalus after the operative removal of a meningocele was in the reduction of a resorbing surface.

The type of surgical procedure which is selected for the treatment of internal hydrocephalus must depend upon the variety of hydrocephalus. In the obstructive type the obstruction must be re-

moved if possible; in the communicating type one must seek to increase the surface which serves for resorption of the fluid.

The Soldiers' Feet.—Webb-Johnson (British Medical Journal) says that Germans found that lifting the foot high when marching made the troops more sure-footed, and that while before its adoption 25 per cent. of the men stumbled, and 10 per cent. fell in a charge over rough ground, the new method practically eliminated such misfortunes. Any recruit should be rejected who exhibits flatfoot, hallux valgus, hammer-toe, ingrowing toe-nail, corns, or bunions. As for flatfoot, it is advised to reject a man if he is quite unable to raise himself on his toes and restore the arch by the action of the muscles of the calf. Mechanical supports are not to be encouraged in the soldier. In those cases of slight defect the heel and sole of the boot may be made continuous on the inner side, or the inner border may be raised so as to throw the foot on the its outer border.

Hallux valgus when well marked incapacitates for a march. Hammer-toe is equally incapacitating and is best treated by excision of the proximal phalangeal joint. Or the toe may be straightened by section of the flexed tendon and the lateral ligaments at the first interphalangeal joint. As to treatment of corns, it is advised that they be rubbed down daily with pumice-stone, and if tender protected with a piece of stockinet plaster. For the radical cure the area of the corn is painted with tincture of iodine, and all the thickened epidermis is cleared away with a scalpel, this being facilitated by making the skin tense with the left fingers. Then the concentrated apex or ridges, which are the actual cause of the pain, are lifted out with a sharp-pointed straight scalpel. To alleviate the pain of the corn a crescentic pad applied to the posterior aspect is advised, this being applied on the posterior aspect of the wound, and covered with a stockinet plaster.

Bunions are generally associated with hallux valgus, and, if accompanied by synovitis, prevent marching. To alleviate the pain a wedge-shaped felt pad should be worn between the great and second toes at the base, and, in addition a crescent-shaped adhesive felt pad on the metatarsal aspect, posterior to the joint. This condition is greatly helped by a one-inch zinc oxide strapping round

the shafts of the metatarsal bones, sufficiently tight to hold them a little closer together, as with a bunion there is always a lateral expansion of these bones.

Sore feet met with after a march if properly treated may be quickly cured. Causes of sore and blistered feet are incident to boots which are either too tight, too loose, or improperly laced, or rough in spots; to socks which are wrinkled, dirty, ore irregular in surface; to deformities, filth, and moisture of the feet; to wounds or bruises or sprains; or to frost-bite or chilblain. The men should be taught to wash and dry their feet every day after work is over. The sock should be greased on the outside with soap. If they show tendency to shrink they should be stretched and worn on the opposite foot. When the feet are actually sore and inflamed they should be rubbed night and morning with alcohol to which should be added 1 to 2 per cent. of salicylic acid. The tender part should be painted with a saturated solution of picric acid, or a solution of chromic acid (2 to 3 grains to the ounce). After drying the feet sprinkle with a powder composed of talc and salicylic acid, 2 grains of the latter to 1 ounce of the talc. Or the feet may be soaked in a bucket of cold water to which potassium permanganate, salt, alum, tannic acid, or salt-petre has been added.

For excessive sweating the feet should be soaked daily in a solution of formalin and water dried, and dusted with zinc oxide or some other powder. The soles of tender feet should be soaped. The author advances the ingenious theory that the gonococcus is responsible for many foot disabilities in the army.

Exploration of the Knee-Joint.—Corney (British Journal of Surgery) says that to explore the joint it is necessary to open in such a way as to allow the maximum of inspection with the minimum of disability afterward, advocates the extension of the operation recommended by Jones and Alwynne Smith as follows:

An incision parallel to the long axis of the limb is made over the front of the leg from about three inches above the patella to the tubercle of the tibia. The skin and fat are divided. All skin edges are hidden by sheets of sterilized cambric held in position by tissue forceps. The fibers of the rectus femoris muscle and the ligamentum patellae are then split in the middle, and the patella is divided longitudinally. The division of the bone

may be done with a saw; or, and as Corner believes is better carpentry, it may be completed by a chisel or osteotome, as is the custom of Mr. Robert Jones. The joint is now opened and the synovial membrane of the suprapatellar pouch divided along the line of the incision. Forming a kind of diaphragm across the lower part of the joint, from the ligamentum patellae to the femur, is the ligamentum mucosum, with the ligamenta alaria on either side. It is necessary to detach the ligamentum mucosum from its attachment to the femur, and divide it, separating the ligamenta alaria, in order to see the posterior part of the joint. When this is done, the two halves of the patella can be retracted with sharp hooks, and the knee flexed so that the condyles protrude between the two halves of the patella and allow the posterior part of the joint to be inspected.

This method of exposure of the joint allows every cranny to be examined by sight, and the "septiciferous" procedure of putting the finger, even gloved, into the joint is avoided. It has been learned that in injuries to the knee-joint other structures than the internal semilunar cartilage are injured; that the crucial ligaments are of prime importance; that recurrent foreign bodies in the joint commonly follow upon injuries; that if the crucial ligaments are not injured, the semilunar cartilages may be, and generally vice versa; and so on.

The functions of these crucial ligaments are well seen during the operation. Bot hare tight in extension and in full flexion; both are slack in the intermediate positions of the joint; and both check rotation movements in the joint, particularly when the crucials are already tight—i. e., in extreme flexion and extension. It is when rotation movements are least restrained, in semi-flexion, that the semilunar cartilages are most prone to injury. By limiting such movements the postoperative stiffness of a joint makes it appear stronger and improved.

The wound is closed as follows: The synovial membrane of the joint with a continuous catgut suture, one below and one above the patella. The ends contiguous to the patella should not be tied until all blood has been removed from the joint, as by a stream of saline. Continuous in preference to interrupted sutures are used, because they give better and more uniform closure of the joint cavity, thus preventing any extra-articular effusion of blood from entering the joint.

When the ends of the sutures close to

the patella are tied, it is seen that the two halves of the bone are brought reasonably into apposition and that it is unnecessary to wire them together. The bleeding from their sawn surfaces has ceased. Another continuous suture of catgut unites the rectus femoris, the prepatellar tissues, and the ligamentum patellae. At times, such as when flexion of the knee during the operation acts like an Esmarch bandage and tourniquet in making a bloodless wound, it is impossible, when the knee is straightened, to check quickly and surely the oozing hemorrhage which exudes from the loose tissues under the quadriceps muscle. In such a case the continuous suture is not used, but merely one close above and one close below the patella—or a single one has been put round the patella. All oozing is thus allowed free escape, and none enters the joint.

Perhaps the most important lesson to be learned from exploring the knee-joint is that the ligamentum mucosum and the ligamenta alaria form a diaphragm across the joint from the ligamentum patellae to the femoral condyles. In this way the joint is separated into two cavities, of which the former, the anterior, is divided—incompletely—into two by the patella, and the latter, the posterior, is divided—incompletely—into two lateral chambers by the crucial ligaments.

This teaches at least two important lessons: First, it is impossible to empty the joint by tapping. As the joint becomes empty, the anterior and the posterior chambers communicate less and less, until finally there exists no communication.

Second, it is impossible to clear the joint by lava genuless the posterior chamber is freely opened. To open this chamber thoroughly, the patella and the ligamentum patellae must be split and the ligamenta alaria cut away. Then, and not till then, can the posterior chamber be washed out. Even then it is necessary to flex the knee so that the femoral condyles protrude between the fragments of the split patella, in order that the cranies at the back of the joint may be scoured thoroughly.

The after-treatment of these cases is simple. At the end of twenty-four hours the splint is removed and the leg left free or between nsandbags. The patient can move it (active movement) as soon as he likes. If there is no inflammation in or around the joint, the movement will return fully and completely. If there is inflammation about the joint, passive movements will be required.

Intestinal Fistulae to Facilitate Recovery from Conditions Following Abdominal Operations.—Malcolm, in the *Proc. Roy. Soc. Med.*, says that after an operation involving the peritoneal cavity conditions sometimes arise in which the surgeon believes that if he can induce the bowels to act the patient will recover, but that if the bowels will not act the patient will die, and yet an autopsy in such a case may show no obvious cause of obstruction. The symptoms are usually attributed to a paralysis or paresis of the intestine, and it is commonly said that the ineffective peristaltic action is caused by a septic infection of the peritoneum. The evidence seems conclusive that in some of these cases the symptoms are due to an increased resistance to the passage of the intestinal contents associated with an enfeebled peristaltic action which is not due to a septic peritonitis. The condition may be described as one of acute intestinal stasis. Occasionally a cure may be affected by making a fistula, this treatment being founded upon the belief that in some cases a delayed action of the lower bowel intestinal distension. In five of the six cases in which recovery took place the fistula was successfully closed. The success of a fistula formation depends mainly upon a selection of cases in which the symptoms are not due to a septic contamination. If the surgeon is confident that his efforts to prevent peritoneal infection have been successful, and especially if he knows that raw surfaces have been exposed uncovered by peritoneum in the abdominal cavity, the possibility that distension may be caused by adhesions to the bowel and that the patient may be saved by making a fistula should not be forgotten. To be successful this treatment must be undertaken before the diffuse peritonitis which precedes death in these cases begins, or at least before it has spread far. But the surgeon has to decide first that the ordinary nonsurgical forms of treatment are useless. If he can do this on or before the third day, if his patient is then in good condition, and if the circumstances of the first operation offer a hope of success, the surgeon may then be justified in attempting to define and treat the case of the symptoms. After the third day, if no gas has escaped from the anus, and if operative treatment is considered necessary, especially if it is known that many raw surfaces have been left uncovered by peritoneum, the surgeon should, as a rule, resist the

temptation to define the conditions present, and should content himself with exposing a distended coil of small intestine as low in its course as possible, or the cecum, and opening it quickly, doing nothing more unless it be to drain the peritoneal sac also. If gases pass the anus after the operation but not freely, surgical interference may be delayed, and the bowels may gradually recover their tone. If the patient gains strength, and the partial obstruction continues, a more extensive operation may be undertaken later, but prolonged distension with vomiting may make the patient so weak that again only the smallest interference possible can be borne and any surgical treatment may be dangerous.

Miscellaneous.

The Drinking of Mineral Water.

The drinking of mineral waters is an established therapeutic custom. The multitude of persons who indulge in the water drinking at the spas, as well as the large number of physicians who repeatedly advise the treatment as an established routine, make it seem more than probable that the practice is a well founded one. Strongly alkaline waters of the Vichy type have a rational use. Laxative waters find an explanation of their effects in the presence of known purgative salts. In the latter class, Pluto Water easily ranks first. It produces a mildly tonic effect upon the mucous membranes of the stomach, due to both its gases and its salts, and, owing to its water and its salts, it is also diuretic. It is exceedingly useful when taken half an hour before meals, to cleanse the gastric membrane and to prepare it for the reception of food. It also serves to dilute and wash out waste material from the system through the kidneys. Patients will usually drink Pluto Water who will not, or cannot drink sufficient ordinary water. A glass taken an hour or two after meals promotes digestion and helps remove the effete products from the blood. Samples, clinical data analysis and literature descriptive of the hygienic methods employed in bottling Pluto will be promptly forwarded on application to The French Lick Springs Hotel Company, French Lick, Indiana.

Glandular Tuberculosis.

The indication for cod liver oil is so marked, of course, that the only question that will come up in regard to its use in such cases, is, the most suitable form in which to give it. Inasmuch as so many of these cases are in young children, the need for a palatable product at once becomes a conspicuous feature.

Cord. Ext. Ol. Morrhuæ Comp. (Hagee) in these cases will be found not only trustworthy as a therapeutic measure, but it also will prove agreeable and may be continued over long periods without causing distress.

Large Crops, Lower Prices, Probable

Viewing the immediate situation, therefore, whether in the United States, Canada, South America, Asia, or Europe, it is plain that the year 1915 is to witness the most exceptional efforts to produce the largest supplies of breadstuffs, vegetables, and fruits,—as well as poultry, swine, and other kinds of food,—that the world has ever known. War conditions and industrial paralysis, on the other hand, will reduce purchasing power,—that is to say, will render the demand for food less effective in the commercial sense. Just how to reconcile these broad facts with the general prediction that very high prices are to be maintained has not yet been set forth.

The speculative and anxious character of the food market last month was simply due to fear as regards the possible closing of some of the larger avenues of commerce. England was obviously dependent upon keeping the seas open in order to obtain her future food supply; and preferred to pay high prices for grain now in sight in order to keep reserves on hand, rather than to let her stock run low with the idea of buying cheaply in the late summer and fall. As for Germany, while her need for food from the outside was less urgent, it was the dictate of common prudence to ship in as much wheat as possible, and to demand the right to obtain food at all times for her civilian population when brought in neutral ships. These conditions greatly stimulated export in January and February, and favored those speculative performances in the United States that kept the price of wheat abnormally high.—From "The Progress of the World," in the American Review of Reviews for March.

The Pneumonia Convalescent.

While the course and progress of acute lobar pneumonia is short, sharp and de-

cisive, the impression made upon the general vitality is often profound and apparently out of proportion to the duration of the disease. Even the robust, sthenic patient is likely to emerge from the deservent period with an embarrassed heart and general prostration. In such cases the convalescent should be closely watched and the heart and general vitality should be strengthened and supported, and this is especially true as applied to the patient who has more or less devitalized before the invasion of the disease. For the purpose indicated, strychnia is a veritable prop upon which the embarrassed heart and circulation can lean for strength and support. As a general revitalizing agent is also needed at this time, it is an excellent plan to order Pepto-Mangan (Gude,) to which should be added the appropriate dose of strychnia, according to age, condition and indications. As a general tonic and bracer to the circulation, nervous system and the organism generally, this combination cannot be surpassed.

Tongaline and Lithia Tablets are particularly indicated for certain diseases which are caused by deposits of urates in the joints and kidneys, and can be used with much benefit for many people who indulge in generous or intemperate habits of living.

After the acute forms of malarial fever are checked by quinine, a slow form of fever sometimes persists not amenable to the quinine. In such cases Tongaline and Quinine Tablets will prove very efficacious.

Faculty Elimination.

This condition which in the main consists of the inability of the emunctories to carry off the normal waste of the body (the urates, oxalates and chlorates,) their retention and accumulation within the body giving rise to a wide variety of toxic symptoms, constitutes a great field for the application of Burham's Soluble Iodine. It should be remembered, however, that every case is a law unto itself, and not only the degree of toxic retention, but the symptoms arising therefrom are open to wide variation. Treatment must be adjusted, therefore, to the requirements of each individual case. An excellent course is to begin with a moderate dose and gradually increase until the full effect desired is produced, regardless of the size of the dose. The efficiency of Burham's Soluble Iodine will be evidenced by the relief afforded the kidneys

A Torpid Liver

—usually a factor of great importance in most digestive disorders—many times needs simply mild but effective stimulation to resume its normal activity.

Gray's Glycerine Tonic Comp.

is especially adapted to effecting proper hepatic stimulation, and can be relied upon to correct "biliousness" and similar affections. Best of all, its influence is physiological, and its benefits are accomplished solely through promoting and reinforcing natural functions.

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and the consequent increase of solids in the urine. It is a well known fact that the principal harm in these cases of faulty elimination comes from the damming back of the toxic wastes in the kidneys. The result is the irritation to be expected, with still further increase in the tendencies to retention. Unlike the potassium or sodium salts of iodine, Burnham's Soluble Iodine has no detrimental effect upon the kidneys. To the contrary, its whole action is beneficial and by prompting renal elimination, the local irritation is promptly decreased. Another advantage is its stimulating effect on skin elimination, an action that further relieves the irritation of the kidneys. Ten minims in water three or four times a day gradually increased a minim each day up to twenty minims three or four times each day are usually effective.

Anedemin Tablets. (opposed to edema)

There is no other preparation, combination or therapeutic agent of its class, combining the active principles of Apocynum, Strophanthus, Squill and Sambucus, giving the same results as Anedemin-Physicians are cautioned against imitators, substitutes or inferior combinations. We give the above infor-

mation for the benefit of our customers and will add that our remedy, Anedemin is composed of the very freshest drugs—scientifically prepared in such manner that any and all objectionable properties are eliminated—we give formula in Full and all information pertaining to Anedemin excepting our methods of treatment to the drugs used, this we retain in justice to ourselves and in view of the prolonged treatment, the class of drugs used, The Real Worth of Anedemin, we give the most liberal price to druggist, who supply physicians and their patients. Physicians who know Anedemin know competitive preparation of cheaper character will not give same results when all is properly considered. We furnish liberal working samples to physicians.

Anedemin Chemical Co.

Camphedine—A New Iodine Preparation. By C. A. Bryce, M.D., Richmond, Va.

The writer has been using in his practice a considerable time an iodine preparation put up by A. H. Robins Co., of this city, and known as Camphedine. The effects of this local remedy have been so remarkable and so satisfactory that I am impelled to call the attention of the profession to the same. I have used it

under many and varied conditions, and attribute its great therapeutic value to the fortunate properties of its vehicle, which permits the remedy to enter the tissues and blood stream, as it were, by osmosis, bringing about results immediate and satisfactory. Wherever the therapeutic properties of iodine are indicated, camphedine can be relied upon, minus the disadvantages of crude iodine. It relieves local pain promptly without local irritation; on the contrary, it can be applied to denuded or burned surfaces as an anodyne.

As an antiseptic dressing, it is equal to any, and without the dangers of most of them. In all cases where prompt absorption, or lymphatic stimulation is desired, it penetrates the tissues almost as soon as it is applied to the skin. Among many cases on my notebook, I will mention one of especial interest, because I attribute the happy relief of all symptoms to the free use of camphedine.

Early in the present year I was called to see a Mrs. B—, a frail little woman suffering from a recurrent attack of appendicitis. The symptoms were plain, positive and unmistakable, and she informed me that former attendants had urged the importance of operation. She was suffering severe pain, and her facial impression denoted reflex abdominal trouble. There was the soggy tumefaction over the appendix, pain and flexed limb on affected side. I put her upon a liquid diet, enjoined absolute rest and quiet and covered the right iliac quadrant with a saturated gauze of camphedine and kept it thus covered until she was entirely relieved, which occurred within twenty-four hours, so far as pain was concerned. In a week she was feeling entirely well, and the tumefaction and tenderness was all gone. She has had no trouble since, and I am satisfied that there are many cases of recurring appendicitis that could be cured through the alternative, absorbent and antiseptic virtues of this remedy which finds its way so readily into the diseased tissues.

Should any physician be interested in the above, we will mail sample on request.

A. H. ROBINS CO.,

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A Highly Significant Fact in Connection with the Examination of the Duodenal Contents.

A thoroughly responsible physician of New York City, with an extensive general practice, (but one who pays special

attention gastro-enteric disorders,) has for quite a time been withdrawing and examining the duodenal contents for diagnostic purposes, according to the method and technique of Einhorn. During the course of his work along this line he has noticed that certain specimens were distinctly foul in odor, requiring examination within two or three hours, because of rapid putrefactive changes, whereas other specimens, considerably less offensive, could be safely left for twenty-four hours or more before applying the necessary test. Seeking for some explanation of this difference, he ascertained, after going over his records, that the contents withdrawn from patients who had been taking Chologestin were the specimens which remained relatively sweet, and that those from patients not so taking Chologestin were the specimens requiring prompt examination, because of rapid putrefaction. Is not this fact highly suggestive and significant as to the antiseptic or anti-putrefactive properties of Chologestin when taken internally? It is not a logical argument in its behalf, as applied to the treatment of intestinal putrefaction and consequent intestinal auto-toxemia?

A New-Proteid-Silver Compound.

An agent for the treatment of acute inflammations of mucous membranes is being announced by Parke, Davis & Co. and promises to meet a real need in medical practice. It is a soluble silver-proteid—an active germicide, astringent and sedative—and is offered under the name of Silvol. The product contains about 20 per cent. of silver. It occurs in scale form, has a dark metallic appearance, and is readily soluble in water. Silvol solutions are not precipitated by proteids or alkalies or any of the reagents that commonly affect other silver compounds in solutions. They do not coagulate albumin or precipitate the chlorides when applied to living tissue.

The use of Silvol is suggested in the treatment of acute gonorrhea and inflammatory affections of the eye, ear, nose, throat, vagina, etc. The product is supplied in bottles containing one ounce and in 6-grain capsules (bottles of 50.) It is non-irritating and non-toxic in proper solutions.

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among

the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vasomotor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

Stopping the World's Trade in Opium

On the recent anniversary of Lincoln's birthday the Minister for Foreign Affairs of the Netherlands Government affixed his signature to a final protocol at the Dutch Foreign Office which gave effect to the International Opium Convention negotiated at The Hague during the winter of 1911-12 by the United States and the powers most closely concerned in the question.

This signature of the Netherlands Minister followed that of Dr. Henry van Dyke, the American Minister, on behalf of the United States and of Mr. Tang Tsing Fou on behalf of China.

The signatures of the three ministers put the International Opium Convention into force over a field which covers approximately 475,000,000 inhabitants: China, with an estimated population of 330,000,000; the United States 100,000,000, and the Netherlands and her dependencies with 45,000,000. Despite the war the signatures of the remaining nations of the world will doubtless soon be added, and the convention will become operative from one end of the globe to the other.

The mitigation of this centuries-old abuse was summed up fitly by Dr. van Dyke on behalf of the United States, which in spite of rumors of war, revolu-

In Septic Infections

—even of the most severe types such as puerperal sepsis, septicaemia, pyemia, pulmonary abscess, septic peritonitis, post-operative sepsis, etc.—results of the most rapid and brilliant character can often be obtained by the proper use of

BURNHAM'S SOLUBLE IODINE

—and these when other measures have signally failed.

Heroic dosage is necessary to stimulate the resistive forces of the body and produce the anti-toxic effect essential to recovery. Doses of 60 to 100 minims every hour or two are not unusual; improvement in the temperature, pulse and respiration is the only guide.

Treatment along these lines has saved many an otherwise hopeless case. The secret of success has simply been "dosage to effect."

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tions in China, and even war itself has persisted in its efforts to bring to an end a long-standing social economic evil.

The American Minister said, in referring to the convention:

The terrible fact that this enormous war is in progress should not make civilized nations ignore things which operate for the welfare of mankind. The opium convention aims at putting a stop to the vicious trade in opium as an intoxicant and at imposing the strictest regulation on the legitimate commerce in opium for purely medicinal purposes. I hope that the three nations which have taken the first definite step in this direction soon will be followed by many others.

It is a great satisfaction that China, which has suffered most from the opium vice, has taken this step side by side with the United States, which has been the foremost nation in adopting legislation against this vicious trade, and that Holland, with her immense possessions in the East Indies, should take the same stand.

Little notice has been given to this truly significant event at The Hague for the press is perforce engrossed with the horrors and acute complications of a stupendous war. Yet the act of the three ministers at The Hague not only brings

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Contains the Coagulents found in the blood of animals, and after exhaustive trials has proved to be a styptic worthy of the highest commendation. It is non-irritating, nonseptic, decreases the necessity for ligatures, hastens the healing of wounds and is especially valuable in Hemorrhages of all kinds, whether external or internal, venous or parenchymatous.

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Literature and Samples Supplied to Physicians on Applications

to an end a chronic conflict but fixes by international law an unique method by which nations, if they will, may settle all contentious questions through the channels of peace.—From "The End of the Opium Question," by Hamilton Wright, in the American Review of Reviews for April.

Campho-Phenique.

The standard antiseptic dressing (powder and liquid) has received the endorsement of eminent surgeons for the past twenty-five years.

Many clinical reports and letters from those who have used campho-phenique indicate that this preparation is one of the best antiseptic dressings that can be applied to suppurating wounds, abscesses, ulcers, chancreoids, burns, etc. It is far more preferable than iodoform, as it is odorless, and possesses pronounced germicidal and healing properties. It destroys bacteria of all kinds, inhibits their growth and renders the field of operation sterile. In the treatment of wounded surfaces, whether accidental or surgical, campho phenique should be employed, both as a prophylactic to prevent the growth and development of pathogenic bacteria and as an antiseptic dressing, where suppuration has already set in. Satisfactory results may be confidently expected when this dressing is used. Samples and literature on request. Campho-Phenique Co., St. Louis, Mo.

Coagulen Ciba.

Chemical:—Coagulen Ciba has all the characteristics of a lipid. Owing to the enormous difficulty of analyzing such complicated organic bodies, the exact chemical formula cannot be given today,

but so much may be stated:

Coagulen Ciba is an extract of blood platelets and contains: Cytozym (Fuld, ordet and Delange) or Thrombokinas (Morawitz) or Thrombozym (Nolf).

By whatever name called, this substance withstands a temperature of 100 deg. C. for several minutes, and when added to animal blood, combines with the Thrombogen (Nolf) or Serozym (Bordet and Delange), existing in solution in blood to form Thrombin or Fibrin Ferment.

Properties: Coagulen Ciba is a yellowish granular powder with but slight odor, a sweet taste, and is readily soluble in water or a normal salt solution, and when dissolved, may be sterilized by boiling for one or two minutes, without injury to its coagulating properties.

Pharmacologic Action: Coagulen Ciba is a physiological hemostatic and produces its effects by strengthening and accelerating the natural process of coagulation. To the Thrombozym (Cytozym) already present in blood, it adds still more and the two together combine with the Thrombogen to form Thrombin, which is the real substance that causes the transformation of fibrinogen into firm fibrin, which transformation we call coagulation. The use of Coagulen Ciba in checking hemorrhage keeps the blood coagulation entirely within the bounds of a physiological process, and is, therefore, harmless and free from irritating effects.

Therapeutic Indications—Coagulen Ciba may be administered:

- (a) Locally by direct application to the bleeding surface, either by spraying or by tamponage.
- (b) By the mouth.
- (c) By intravenous injection.

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(d) By subcutaneous injection.

(e) Bv (c) and (d) combined or even by (b), (c) and (d) combined.

Doctor Anton Fonio, First Assistant Physician of the urgical Clinic of the University of Berne, Switzerland, and Chief Surgeon of the District Hospital of Langnau, near Berne, has recently published his experience in the treatment of about 700 cases with Coagulen Ciba by all methods of administration, and states that in no case was any septic effect observed. His experience was confirmed by Kausch after treating 300 cases as well as by Dr. H. Obermueller, after an exhaustive study of its use in rhinological operations.

Fonio has also demonstrated that the danger of embolism or thrombosis from the intravenous or subcutaneous administration of Coagulen Ciba is indicated in all cases of local hemorrhage, whether resulting from wounds, disease or surgical operations, in parenchymatous, concealed, inaccessible and pulmonary hemorrhage, hemophilia, in surgical operations, as a prophylactic and to keep the field

of operation clear when bleeding is profuse, as well as to shorten both the time of operation and the healing process. It is indicated also in gynaecology, lapotomy and operations on bony structure and in the eradication of tumors.

Dosage:—A Coagulen Ciba solution must be made just before using and thrown away afterwards, as it does not remain sterile. It is quickly prepared by dissolving the powder in a sterilized physiological salt solution, such as is kept in every hospital and afterwards sterilized by boiling for three minutes. A 5 per cent. solution is recommended, but some authorities prefer a 10 per cent. solution, and in urgent cases, ordinary pure water may be used in place of the sterilized salt solution.

For intravenous and subcutaneous injection, Fonio's more extended experience has led him to prefer a 3½ per cent. solution. For adults, the total amount of Coagulen Ciba to be injected, should be 5 grains dissolved in 143 c.c.m. of water. Of this 30 to 70 c.c.m. should be used intravenously and the remainder

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 9th " Dr. D. J. Hill, Lexington.
 10th " Dr. M. L. Stevens, Asheville.
 H. D. Walker, M. D., Treasurer, Elizabeth City.
 Leader of debate—Dr. L. B. Evans, Clarkton, N. C.
 Orator—Dr. J. M. Northington, Boardman, N. C.
 Essayist—Dr. Mary E. Lapham, Highlands, N. C.

The next annual meeting of the North Carolina Medical Society will be held in
 Greensboro, N. C., on the third Tuesday of next June.

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subcutaneously, in order to obtain an energetic and prolonged action. Should headache, swimming in the head or other unfavorable symptoms occur, the intravenous injection must be stopped at once and replaced by the subcutaneous, when as much as 10 grams of Coagulen Ciba may be administered.

The chief requirement in the use of Coagulen Ciba is to apply it at the exact point of bleeding. This may be done by spraying or the use of a mop or tampon. When a mop is used, it is of the utmost importance to lift it straight up and down and not to brush the bleeding surfaces, which would tear away the coagulating blood.

New Location.

The Auto Supply Company moved to No. 9 S. Church street on January 1, 1915, from No. 33 West Fourth street where they were in business for one year.

This company bought out the L. T. Henderson Company who were successors to the Consolidated Tire & Oil Company. The officers are D. G. Hilton, President; E. T. Wadsworth, Vice-President; and H. B. McGill, Secretary and Treasurer. Mr. McGill also has charge of the business.

The company is not pushing any particular tire, but sells all standard makes and therefore can give you its unbiased opinion of the best tire for the price. The company also carries a general lines of supplies and furnishes free air to its customers.

Reprint From the N. A. R. D. Journal.

Since the Harrison law became effective, many manufacturers of preparations containing narcotic drugs have hastened to change their formulas so as to permit the unrestricted sale of their goods. The manufacturers of Glyco-Heroin, on the other hand, are making no such changes, and point out plainly that this preparation is not intended to be sold indiscriminately, but was designed for the use of physicians on prescriptions, a use to which it may still be put.

Pharmacists will be likely to agree that the restriction of the sale of preparations containing heroin to the compounding of physicians' prescriptions is a good thing for the public welfare. Therefore they may be expected to receive the announcement of the manufacturers of Glyco-Heroin, the Martin H. Smith Company, of New York, that they do not care to cater to self-dopers, with commendation.

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Its action on the heart and blood vessels makes it valuable in conditions of general vasomotor insufficiency, and in all conditions of low blood pressure accompanied by rapid heart action. It is said to be useful in controlling pulmonary hemorrhage.

3. **Rise of blood pressure,** due to the contraction of the muscular walls of the blood vessels, particularly the arterioles of the peripheral circulation. Its blood pressure raising action resembles that of suprarenal products, but the effects are much more prolonged. The increase in blood pressure causes an increased activity of the kidneys and also makes it useful in controlling the rapid pulse of pulmonary tuberculosis, typhoid fever, pneumonia, etc.

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*A Pharmacodynamic Study of the Pituitary Gland, with Tests of a New Product, by Heidberg, Pittenger and Vanderkleed.—Jour. A. Ph. A., June, 1914, page 808. The Application of Some Muscular Tissues Adapted to Physiological Standardization, by Stewart and Pittenger.—Monthly Cyclopedia of Medicine, July, 1914, page 305.



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Our Contemporaries.

The Kettle Gets Back at the Pot.—The Journal of the A. M. A. pays us a very handsome compliment for our reading matter, while protesting against our carrying the advertisement of Duffy Malt Whiskey which is said to be advertised as a consumption cure. Our readers will note that the advertisement which we carry, as well as those of the other journals criticised, so far as we have been able to consult them, are perfectly proper, conservative statements of generally accepted alcoholic therapeutics. Under ideal conditions, alcoholic beverage should be used only as drugs or adjuvants and should be advertised only in medical journals. Under existing conditions, they are not so used and we cannot refuse properly worded advertisements of reputable firms on the basis of lay advertising, any more than we can those of manufacturers of soaps, foods, or strictly commercial wares. The British Medical Journal has, we are informed, accepted the Duffy advertisement after investigation. The only advertisement of this firm that we have found among many newspapers and magazines, is one advising, at the beginning of a cold, to go to bed and take a hot lemonade with a small quantity of whiskey (Duffy's of course.) This is generally accepted advice and comes well within the field of domestic therapeutics.

But we have found that the Journal of the A. M. A. carries advertisements of medicinal soap, foods, beverages, cod liver oil, etc., which are advertised to the laity—not to go back beyond the very recent ethical advertising code of that Journal. There is no difference in ethics that we can see between advertising whiskey as a consumption cure and advertising another milder beverage as "a true tonic without an evil aftermath," or advertising cures of skin diseases, or dwelling on the nutrient wonders of prepared foods which the profession employs in feeding delicate infants, serious digestive cases, etc. As to cod liver oil, the advertisement which the Journal of the A. M. A. displays so conspicuously and which is essentially duplicated in a number of popular magazines, does not mention tuberculosis but it does not need to. The laity associates this disease and this food—or drug—without present instruction.

Just as a matter of interest and not as an expression of personal opinion nor as an endorsement of the policy of advising lay use of medicaments even on a basis

of fact, we would recall that it is not many years since alcoholic beverages were pretty generally regarded by the profession not merely as adjuvants in diet but as distinctly curative in tuberculosis.

In the last six months, we have sacrificed about \$200 worth of advertising on ethical grounds, but we cannot place nice ethical distinctions higher than common honesty in fulfilling business contracts. The Journal of the A. M. A. has a support which is practically unlimited, independently of advertisements. It is making a large annual profit, both from advertisements and from the dues which are considerably more than are necessary for the maintenance of the organization and its publications. An independent journal, on the other hand, is supported mainly by its advertisements. Notwithstanding this fact, we may say that our policy in regard to the Buffalo Medical Journal is precisely the same as in regard to practice of medicine. If it cannot be maintained ethically and on a satisfactory plane of professional usefulness, it will not be continued. Fortunately, there is no prospect of failure; on the contrary there has been an increase of professional and business support which warrants full confidence in an indefinite term of usefulness.

Not to dodge an issue, however, we may say that a periodical is a public institution. It is impracticable to make everything in it, in every department, conform to our own or any one else's views. To do so would be contrary to the spirit and probably, the letter of the law, if anyone chose to contest the point. In making this qualification, we wish to guard explicitly against its interpretation as a disposition to violate principles of right and wrong or even of ethics in the broad sense.—Buffalo Medical Journal.

The Phthalein Test From the Viewpoint of the Abdominal Surgeon.

A method which will accurately determine the functional capacity of the kidneys—one which, applied before operation, will allow one to know with approximate exactness how much deviation from the normal is to be expected after operation—has long been awaited, and is still hopefully looked forward to. Cryoscopy, Bouchard's method of determining the toxicity of the urine, Albarran's method of experimental polyuria, Kutner's methylene blue test, Voelcker and Joseph's indigo-carmin test, the phloridzin method of Casper and Richter, Am-

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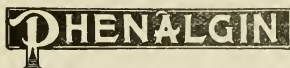
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bard's method of correlating the amount of urea in the blood and in the urine (Ambard's coefficient), the phenolsulphone-phthalein test of Geraghty and Rown-
tree—the development of these and many other less important tests has come from the demand, particularly on the part of the surgeon, for such knowledge of the actual functional worth of a kidney or kidneys as will allow an intelligent estimate to be made as to what may be expected of the other kidney in contemplated nephrectomy, or of both kidneys when other serious operations are under consid-

eration. Of all these the phthalein test has perhaps come the nearest to fulfilling our expectations, and yet this also falls far short of the hoped for ideal. It was at first enthusiastically taken up by genitourinary surgeons, but they soon found that blind dependence upon its accuracy often resulted disastrously; and that while a valuable aid, it could not be the sole criterion as to the functional worth of the kidneys, but should be supplemented by the use of other methods, the final decision depending upon consideration of all evidence available in the individual case.

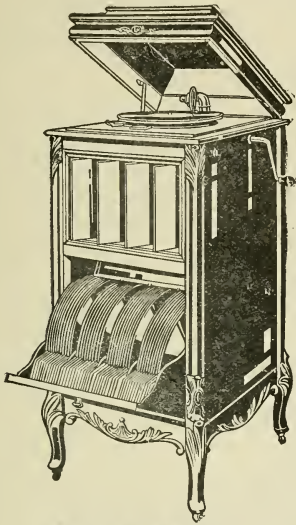
One question that has never been decided is the minimum two-hour percentage output with which it might be considered safe to do a major operation. Rowntree himself, in answer to this question, would only say "the greater the output the less the risk." To decide this point, if possible, and also to determine if the test would be of value to the surgeon in his routine work, Stephen E. Tracy (Surg., Gyn. and Obst., Dec., 1914) employed the test in about 300 cases, taking them as they came, with absolutely no selection. In the selection of cases for operation he paid no attention to the functional test reports but decided upon the basis of other data previously used. This paper is based on observations of the first 100 cases, on which 120 tests were made. The dye was injected deep in the lumbar muscles and appeared in the urine in from five to forty-two minutes, the average being ten minutes and eighteen seconds. The total output (for two hours) varied from 21 to 96.5 per cent., for the second 20.83 per cent., and for the two hours 55.1 per cent. In 91.7 per cent. of the tests the output was greater in the first hour; in 8.3 per cent. in the second hour. In 20 per cent. of the tests there was not over 4 per cent. difference between the output in the first and second hours. Five cases with the lowest output in the series (21 to 27.5 per cent.) were considered good surgical risks, were subjected to major operations, one of which was a nephrectomy, and had a normal convalescence. Other cases with a much higher phthalein output died from uremia from five days to something under two months after operation. The output in four of these cases was, respectively, 53, 55, 72, and 87 per cent. In another case in which it was known that the kidneys were not normal the phthalein output was 90 per cent.

Tracy's conclusions are: "It does not seem possible to work out the minimum

percentage phthalein output operations, nor is it possible from the phthalein test to determine what cases should or should not be subjected to operation. I believe it will never be possible to determine this point by any laboratory test, as the functional activity of the kidney varies under numerous circumstances and at different times. In determining whether or not a patient should be subjected to operation, the history, clinical symptoms and physical examination are of much greater value than any renal functional test yet devised. The phthalein test used in conjunction with the clinical symptoms, history and physical examination is of value. A small percentage output should put the surgeon on his guard and cause him to study the patient most carefully before undertaking an operation. The phthalein test should be used only as one of the many methods of investigation in ascertaining the condition of the patient." These conclusions correspond with those already arrived at by the genitourinary surgeons and not at all with the more sanguine remark of one of the originators of the test, Rowntree, that the greater the output the less the risk. There is no denying the fact that it has a certain value; but it is as a link in the chain of evidence and not as the court of last resort when the functional value of the kidney is under adjudication.—Editorial, in The New York Medical Record.

The Opportunity for Medical Education in America.

The present state of demoralization which the European war has produced in all the countries engaged in the conflict and which cannot possibly be recovered from for many years to come, must inevitably result in much benefit to our own country in many ways. The opportunity which suggests itself to us most forcibly lies in the matter of higher medical education and the development of post-graduate medical work in America. The procession of students which for years has been marching to the great medical centers of Europe must of necessity stop since for the present at least those centers of medical education have ceased to exist. The necessity for post-graduate work in medicine will, of course, continue but the facilities of our own clinical centers must furnish the opportunity. Except for the general broadening and stimulating effect of foreign travel there has not for many years been any real necessity for a medical student to go to Europe to finish his education for we have



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in our own country great clinics and great teachers in every department of medicine, and these do not suffer in comparison with those of any other part of the world. The opportunity is at hand for our medical schools to show what they can do and we have no doubt that this opportunity will be taken advantage of. Indeed preparations are now being made in Boston, Philadelphia, Baltimore, New York and Chicago to take care of much larger numbers of post-graduate medical students than ever before. Not only will these schools be besieged with great numbers of American students, but probably foreign students will flock to them since the medical schools of Europe will be in no condition to take care of them for some years, for the reconstruction period on the continent must be a very long one. The Chicago Medical Society, through its committee on medical education, has already announced elaborate plans for this winter in which practically all the teaching hospitals and all the medical teachers of Chicago will take part. Special lines of clinics for each month have been announced and opportunities for special study in every department of medicine and surgery will be offered. If the great medical schools of this country seize their present opportunity instead of large numbers of American medical students rushing every year to the great clinics of Germany, Austria or France, the future will witness great crowds of French, German and Austrian medical students flocking to the post graduate schools of the United States. There is no reason why this should not come to pass and every reason why it should. The hall-mark "Made in Germany" will no longer be stamped upon a completed medical education, but instead it will read "Made in America."—Editorial, in *St. Paul Medical Journal*.

Cancer in France in Relation to Fuel.

A very suggestive study has been made by Green upon the distribution of cancer in France, which indicates that there may be some relation between the sulphurous fumes given off from coal and charcoal, and a high death rate from cancer; his charts, published in the December issue of the *Edinburgh Medical Journal*, are at least provocative of thought.

Mr. Green states that in the charts made by M. Bertillon, showing the death rate per 100,000 from cancer in France for the years 1906, 1907, 1908, it may be seen that in the southern half of France there is a great area which does not con-

tain a single department where cancer is frequent, and that in the northern half of France, there is a great square, corresponding to the geological basin of which Paris is the centre, where the death rate per 100,000 inhabitants is four or five times as great as in the south, and yet the geological basin does not seem to indicate any condition underlying the increase, for although Brittany on the west and the Vosges region on the east are out of the geological basin, and also very free from cancer, yet Pas de Calais, Nord, and Somme, which do not form part of the basin, suffer much from cancer. Bertillon points out that it is chiefly cancer of the digestive tract, not including cancer of the mouth, which has increased so rapidly during the last thirty-five years in Paris, as well as in Amsterdam, and notes that the few cases of cancer found among the Hebrews in Algeria and Amsterdam, compared with other nationalities, had suggested a series of researches on the relation of meat diet to cancer, but that these had led to no result. He also observes that in a strikingly consistent way the distribution of cancer in France shows that in all regions the death rate was nearly always twice as high in the cities as in the adjoining country places.

Mr. Green, equally struck by these remarkable charts, believes that the cause must be connected with the nature of the fuel burned in the various departments, coupled with the fact that the farther one goes north, the colder the country is in winter, and the greater the amount of fuel is burned. Mr. Green had already shown in previous papers (*Ibidem*, October, 1912, and August, 1913) that "there is a mysterious connection between the fuel used and cancer incidence." In Nainshire cancer seems to be actually nonexistent in the districts where nothing but a light nonsulphurous peat is burned, whereas it is very common in that part of the country where coal is used, commoner indeed than in other districts in Scotland. In Orkney again cancer is common in a few districts where nothing but peat is burned, but it is a peat which is like coal in character and has a very high sulphurous percentage." The malignant tumors that prevail among the natives of the high valley of Kashmir in India, and which have been attributed to the chafing of the kangri or small braziers of fuel, which the natives carry under their clothing to warm their bodies, are undoubtedly due to the fumes of the fuel, which, on examining specimens sent to him, he found to be charcoal. Mr. Green there-

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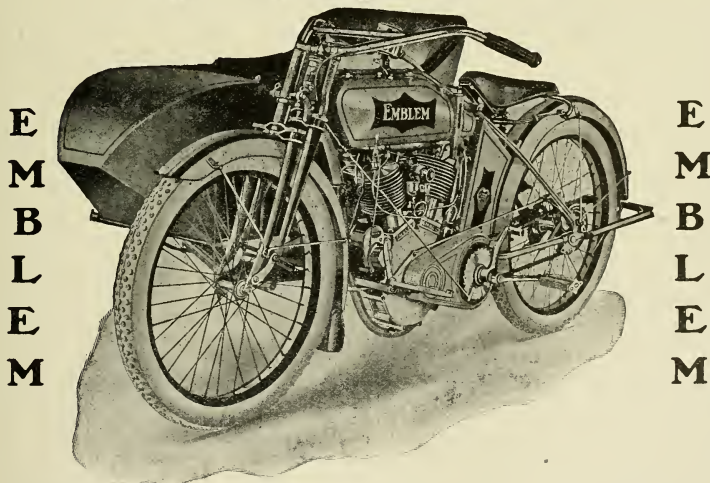
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fore wrote to the presidents of the Departments of France, asking for information along these lines.

"The results," he remarks, "seem to be striking. . . . It will be seen that wherever nothing but coal is burned, the town death rate is very high; where wood and a little coal is burned, the death rate in both town and country is average; where only wood is burned the death rates are very much below the average . . . with the exception of the departments of aCantal, Aveyron, and Tarn. The prefet of Cantal wrote that coal was used almost altogether in both town and country; and the prefet of Aveyron, the adjacent department, wrote that though wood was used exclusively in the country, coal was used in the towns, yet the death rate from cancer in those departments was very low."

This, at first, seemed unaccountable, but when the prefet of Cantal sent some of the coal used for domestic purposes, it was found to be a beautiful hard, glistening, jetlike substance, without any impurities such as pyrites, and wholly unlike most coal used for domestic purposes. On analysis it showed the same low sulphur content as the peat burned in those districts in Scotland where cancer is so rare. This discovery was as much a surprise as was the high death rate in Orkney, Scotland, where only peat was burned, and which seemed to be an exception to the rule until it was discovered that the Orkney peat had a very high sulphurous content.

Mr. Green concludes: "The results of such inquiries as I have made, into the fuel conditions of those districts where cancer is rife, seem to me to point conclusively to the fact that the etiology of malignant disease has some subtle connection with fuel and its products of combustion, a connection which lies somewhere about the difference between wood and charcoal, and between the coal of Aveyron and Cantal, and that of the north of France."—Editorial in *The New York Medical Journal*.

Malpractice.

In an action for malpractice consisting of the alleged improper treatment of the plaintiff so as to necessitate the removal of her uterus, it appeared that the plaintiff commenced to flow excessively; that the defendant was called; that he told the plaintiff's husband that the plaintiff was going to have a miscarriage; that he could not call that night as he was about to make another call, but he gave him some medicine for her to take and said he

would call the next morning. The defendant testified that the medicine he gave for the plaintiff to stop the flowing was ergot, which the undisputed evidence showed was a proper remedy and was effective. He further testified that when he called the next morning he sterilized his instruments, dilated the vagina with a speculum, removed from it all the blood clots, some of which were dark and resembled pieces of liver, with a curette, and tamponed the vagina with antiseptic wool tampons, which he pressed against and around the mouth of the uterus with a pair of dressing forceps; that none of these instruments penetrated the uterus; that he took nothing but the blood clots from the vagina, and that the whole treatment occupied not more than twenty minutes. He further testified that on the following morning he removed the tampons, washed out the vagina with an antiseptic solution and tamponed it again; that he told the plaintiff and her husband that he considered her condition serious and that it might be necessary to have an operation performed; that he was not a surgeon and advised them to consult a surgeon, and that Dr. Otis was agreed upon; whereupon Dr. Otis came and made a diagnosis. He announced that the plaintiff was suffering from a rupture of the uterus, and she was taken to a hospital and the uterus removed. The undisputed evidence in the case was that when Dr. Otis performed the operation he found a rupture of the fundus of the uterus at a spot where there had been a chronic degeneration thereof; that the degeneration had proceeded to such an extent that when he attempted to sew the ruptured parts together the tissues would not hold the stitches, and he was compelled to remove the uterus entirely; that no pieces of flesh had been torn from the uterus; that it showed no evidence of laceration or bruising, or of having been abused by the insertion of instruments; that the uterus itself was preserved by the plaintiff, introduced on the trial and corroborated the above facts; that the rupture found in the degenerated portion of the fundus of the uterus was sufficient to have caused the excessive flowing; that this degenerated condition was sufficient to have caused the rupture therein; that the excessive flowing took place before the defendant did any of the acts complained of. It was held that fair consideration of the above facts could lead to but one conclusion, viz., the excessive flowing was caused by a rupture of the uterus; the rupture of the uterus was

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caused by the chronic degenerated condition thereof; and that such chronic degenerated condition of the uterus was the cause of the necessity for its removal, and not anything the defendant might have done. It was therefore held that the defendant was not responsible for the removal of the uterus, and judgment for the plaintiff was reversed.—Barton v. Southwick, in The New York Medical Record.

So-Called Arterio Mesenteric Duodenal Ileus.—Melchoir (Berlin Klin. Wochenschr) describes this type of high ileus, or acute gastric dilatation, which is supposed to be due to a constriction in the third part of the duodenum at the duodeno-jejunal junction caused by some tension on the mesentery of the small intestine. At the point at which the duodenum merges into the jejunum it pierces the root of the mesentery and is in relation posteriorly with the lumbar spine. Immediately above this portion of the duodenum is the origin from the aorta of the mesenteric artery. When this vessel leaves the aorta it extends downward between the leaves of the mesentery forming an acute angle with the spine. The duodeno-jejunal junction lies in this angle between the mesenteric artery and the spine. Any unusual tension upon the mesentery of the small intestine, tends to make this angle more acute, bringing the mesenteric artery nearer the spine. This will cause pressure on the duodenum.

In quadrupeds the superior mesenteric artery leaves the aorta at a right angle, leaving the duodenum free. The assumption of the erect posture in the human animal has caused this angle to become more acute. This according to Codman is an important factor in the production of the syndrome of Glenard's disease. The pull on the mesentery is usually caused by some general atonic condition allowing the ptosis of the great mass of

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small intestine into the pelvis.

The clinical picture of this illness is quite uniform. The author quotes the following concrete case as an illustration of the most usual type of history:

The patient two or three days post-operative from some abdominal operation, begins to vomit. In the beginning the abdomen is soft and there is no abdominal rigidity. One is usually astounded at the large quantity of the vomit. This is a clear somewhat bile-stained fluid. Gradually the vomiting becomes more frequent and the quantity increased, pulse becomes more rapid and there develops a slight distension confined to the epigastrium, where there is

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also some slight abdominal rigidity. The patient becomes restless and complains of thirst. If the condition is allowed to go on untreated the vomiting becomes more frequent, all the symptoms become more severe, vomitus becomes blood tinged. The distension gradually extends from the epigastrium downward until the entire abdomen is greatly distended. The patient becomes apathetic, the pulse becomes weak and rapid, singultus begins and at this stage the patient resembles one dying from general peritonitis. Death occurs usually in four to five days, but in protracted cases symptoms may last as long as two weeks.

At autopsy one is struck on opening the abdomen with the extreme dilatation of the stomach. There are two huge arms of dilated stomach, the left extending from the cardia downward to the left Poupart's ligament, here there is a sharp kink of acute angle with the right arm which extends upward to the pylorus. The pyloric opening is widely dilated so that the pyloric antrum communicates directly with a markedly dilated duodenum. This dilatation of the duodenum extends from the pylorus to the duodenal jejunal junction. At this point there is a constriction about the breadth of two fingers. The mesenteric vessels lie directly over this constriction. Beyond the constriction the entire small intestine is contracted. The ascending and transverse colons are slightly dilated, the sigmoid and rectum contracted.

The treatment is frequent emptying of the stomach with a stomach tube with lavage. The patient should be placed for periods of time supported in the knee-chest position.

The main point that the author brings out is that in many cases he has been able to trace this condition to woolen underwear and woolen sweaters which have been lying over from previous winter. He believes that a fungus has developed in the wool and therefore advises that all woolen garments held over from the previous winter be thoroughly re-washed and dried, regardless how spotlessly clean they may be, before being worn again.

Treatment of Simple Anemias in Young Children.—Maillet, (*Presse medicale*) points out that in children less than one year of age anemia may be caused by poor milk, excessive feeding, or less frequently insufficient feeding; in those older than one year a similar condition may result from an unduly pro-

longed milk diet, weaning too suddenly, or the administration of food not suitable for young children. Suitable changes in the diet should be made in both cases. In children over one year, barley, lentil, or other similar porridges, or yolk of egg—all articles rich in iron—may be given, though due trial and selection will have to be made, the same articles not being suitable for all cases. In children fourteen to sixteen months old, raw meat may be given, especially if there have been manifestations of subacute enteritis with diarrhea. During fifteen to twenty days in each month, from twenty to forty grams (5 to 10 drams) of the meat may be given, frequently with a little dilute hydrochloric acid in the form of lemonade and a small amount of pepsin. Only when the gastrointestinal condition has improved should iron medication be taken up in these cases.

In anemia of syphilitic origin he recommends intramuscular injections of benzoate or biniodide of mercury, the dose being 2 to 4 mgm. (1-32 to 1-16 grain) daily in children less than one year old and five mgm. (1-12 grain) in those between one and two years. Two to four series of ten injections each, with ten day intervals between series, should be given. Iron should not, however, be neglected; in some cases in which neither mercury nor iron alone gives sufficient results, combination of the two leads to a rapid regeneration of the blood. The dose of iron should be 0.1 to 0.2 gram ($1\frac{1}{2}$ to 3 grains)—of one of the iron salts—per diem.

Arsenic, in the anemias of young children, has yielded benefit within a few days in the hands of a number of observers, but in anemia of digestive origin there is some likelihood that the drug, even in moderate doses, will increase the anemia. Frequent blood examination is therefore in order if this drug is used. Iron, given as the lactate, tartrate, subcarbonate, or glycerophosphate, gives more prompt and lasting results than arsenic. The tincture of ferric chloride, in doses of ten to thirty drops, is another preparation which is convenient for use in infants. At times the remedy is not well absorbed, as indicated by a dark coloration of the stools. In this event, one or two teaspoonfuls of lemon juice or dilute hydrochloric acid lemonade may with advantage be given one half hour after meals. If the drug is not well borne when taken by mouth, subcutaneous injections of cacodylate or citrate of iron—0.03 gram in every one

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c. c. should be administered. Treatment with iron for twenty days is generally sufficient in the simple anemias of young children. In the more severe forms, however, the treatment must often be continued for two or three months, the remedy being given twenty days in each of these months. Careful hygiene and a stay in the country or at some mountain resort are to be borne in mind as important or even indispensable measures complementary to the drug treatment. Subcutaneous injection of twenty to thirty c. c. of normal saline solution on alternate days for a month is sometimes a useful procedure, though in tuberculous or syphilitic infants it has been known to cause febrile reaction. Stimulation of the hematopoietic tissues by means of the X-ray, and the administration of cholesterol as an antihemolytic agent, are measures indicated more especially in severe forms of anemia—pernicious, splenic, or pseudoleucemic.

Intramuscular Administration of Quinine.—Clarke, (*Journal of Tropical Medicine and Hygiene*) protests strongly against suggestions recently made that intramuscular use of quinine salts be abandoned on account of a supposed risk of causing the development of tetanus and the inefficiency of the method compared with other routes of administration. The danger of tetanus, he holds, has been exaggerated, and for practical purposes need not be taken into account. Slow absorption has been given as a reason for not employing the intramuscular route, but this is possibly an argument in its favor, as absorption by this route is practically continuous, and some quinine remains in the blood for a long time after the injection, ready to kill any sporulating organisms, whereas if quinine is otherwise administered, e. g., by the intravenous route, the whole may be eliminated before sporulation takes place. In the author's experience many patients have become so convinced of the superiority of the intramuscular method that, even though they cannot be persuaded to take quinine by the mouth, they actually ask for the injections. In very many instances he has observed a fall of temperature after intramuscular injections, where no influence whatever had been exerted by quinine taken by mouth.

Congenital Atresia of the Postnasal Orifice.—Richardson, in *The London Lancet*, states that the occurrence of congenital obstruction to the postnasal ori-

fice is described by many writers as a very infrequent form of nasal deformity, but if all cases of asphyxia neonatorum were properly differentiated, we would probably find that this form of deformity is responsible for no small proportion of these cases. Congenital atresia is that form of obstruction of the postnasal orifice that takes place in utero, the result of a misplacement or other malformation in the embryo, not in any way due to inflammatory reaction or pressure, and usually characterized by a more or less complete partition, obstructing one or both post-nasal orifices. Luschka considers the obstructing plate to be a projection upward and backward of the horizontal plate of the palate bone. The Kundrat theory is that the obstruction is due to an extension inward of the vertical plates of the palate bones. According to Hopmann, the choanal obstruction is an extreme degree of the occasionally observed choanal asymmetry. The opinion advanced by Bitot is that the plate forming the partition is a separate, independent bone, as indicated by the separate sutures evidenced therein. The diagnosis of this condition is not attended with any difficulty if one only had the thought of the disturbance in mind. In infants we have difficult breathing, cyanosis with threatened asphyxia, the characteristic struggling child with tightly drawn lips and indrawn cheeks, relieved, at last, from its impending suffocation by a crying spell; the constant repetition of this cycle. The older child and adult give the history of not breathing through the nose, unilateral or bilateral, since birth; and of extreme difficulty of rearing the child on account of the problem of feeding. An excessive and annoying thick, clear, albuminous-like mucous secretion is almost pathognomic of congenital post-nasal obstruction. In infants and adults the impermeability of the postnasal cavities from the nasal chambers can be readily demonstrated by gently douching through the anterior nares. By palpating with a probe through the anterior nares do we not only localize the seat of the obstruction, but also its probable character. Through anterior and posterior rhinoscopy, postnasal digital exploration and transillumination, we obtain additional information as to the condition of the nasal chambers. Expectant treatment aims at the establishment of artificial mouth-breathing and the proper nutrition of the infant who is unable to take nourishment in the normal manner. As soon as its condition is properly diagnos-

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ed, the infant should not be allowed to have any attacks of asphyxiation. This is accomplished by constantly holding the lower jaw slightly depressed by pressing slightly on the chin. This procedure requires someone quite alert to be constantly with the infant. The feeding must be resorted to through the medium of a spoon. The factors in favor of operation, should it be successful, are the immediate relief to the sufferer, and its ability to breathe and take nourishment normally almost immediately thereafter. Should operative intervention be delayed, the period of election for the operation is when the pharynx is sufficiently well developed to permit of easy manipulation with the guiding finger in the nasopharynx, that is as soon after the ninth month of life as practicable.

Pruitis Vulvae. — Eyraud-Dechaux (Rev. De Gyn.) considers the subject of pruitus vulvae as of importance not because it is dangerous to life, but because it may become so severe as to render life not worth living, and destroy the stability of the nervous system. It is often an indication of serious lesions of the genital organs or of a general disease, such as diabetes. In the immense majority of cases the lesions situated around a mucous orifice are the result of a lesion of the neighboring mucous membrane. In many cases we cannot find any lesion of the genital or perigenital region at all, and in these cases it results from a general disease. The first thing in the treatment of a pruitus is to ascertain its cause and abate it. Under the head of general etiology the author mentions that certain races, as the Jewish, are especially subject to pruitus; some cases appear to have a hereditary factor. The crises are often brought about by the heat of the bed, by the congestion of the menstrual period. There is at first no lesion to be seen, but soon there are changes in the skin due to the irritation of scratching and the whole picture is transformed, the skin becoming thickened fissured, and

crusted. There are several kinds of parasites that may cause pruitus, such as phthiriasis. Other cases are due to the use of medicinal substances or toilet articles applied to the vulva. Various kinds of intestinal worms may cause reflex irritation of the skin. Thrush is a cause in infants. Urethritis, vesical calculi, hemorrhoids, herpes, and vulvar syphilis are other causes. Vulvo-vaginitis, metritis, fibromata, cancer, and salpingitis, by irritating discharges may all cause agonizing pruitus vulvae. Pregnancy is another cause. At the menopause it develops in arthritics. Leucoplakia again causes intense pruitus, and only removal of the patches will bring relief. Diabetes is the general disease that is most frequently a cause of pruitus, and there may not be any visible genital lesion. Treatment may be local of various kinds, washes, lotions, powders, etc. General hygiene, and feeding must be looked into; traumatism and local affections studied and relieved. Various articles of diet must be interdicted, and the digestive tract put into the best condition. Nervous excitability may be moderated by valerian, etc. Hot water applications to the vulva are of use, and also hot air.

Of electrical applications that are of value the continued current, static bath, high-frequency current, and X-rays may be mentioned. Radium has relieved some subjects. Linear scarifications, superficial cauterizations, and incisions of the terminal nerves have done some good in severe cases. Most cases will yield to three methods of treatment wisely combined, general treatment, symptomatic treatment, and causal treatment.

Diplosal in Polyarthritits.

According to Kukulius the value of diplosal has not been sufficiently recognized. The first case treated by the author with diplosal was that of a severe acute polyarthritits due to a streptococcus infection. After three days the coating of the tongue had disappeared, the fever

dropped and the appetite returned. The local symptoms also subsided so that the patient was fairly advanced in convalescence after three weeks. Since then, the author has used diplosal continuously, especially in acute, rheumatic polyarthritis. In the subacute form, without edema, the effect is not so prompt, but excellent results are the rule in the acute types of myositis, in rheumatic neuralgias and in dry pleurisy. The development of an endo- or pericarditis was never observed while diplosal was given, but wherever present it may be cured by the drug, as was demonstrated in a case of pronounced mitral insufficiency.

Chemically, diplosal is the salicylic acid ester of salicylic acid itself, and one part corresponds to 1.07 parts of free salicylic acid as it breaks up into two molecules of the acid by hydrolysis in the small intestines. As a consequence, the stomach is not affected and the appetite returns rapidly. Disagreeable perspiration, the author states, does not occur and after-effects on the part of the vital organs were not observed. Palpitation of the heart and buzzing in the ears are rare. The dose generally recommended is one to two tablets three times daily; this may be reduced to one-half during convalescence. The author uses diplosal as a prophylactic for colds. It is possible, he states, to suppress the coryza without going to bed. With other salicylic acid compounds this is often impossible owing to the profuse perspiration.—Therap. d. Gegenwart.

Total Alopecia After Accident.—Frank (Berliner mediz. Gesellschaft) reports the case of a man 47 years of age who fell from a height and suffered three broken ribs on the right side. These healed up within 4 months. About 8 days after the accident the patient began to lose his hair and within 3 months he had lost his hair completely, not only on the head but his eyelashes, eyebrows, axillary hair, pubic hair, mustache, beard and the hair on the trunk and extremities fell out entirely. The only hair that remained was that in the anterior nares and in the ear. His nails were unchanged, his nervous system, sexual and mental conditions were normal. This state of affairs has lasted more than 10 months without any regrowth of hair. There seems to be hardly any question between the relationship of the accident and the alopecia.

Whereas alopecia has been regarded as of parasitic origin it is quite certain that it may also be the result of trophic

disturbances. Alopecia areata frequently has a traumatic origin, and Joseph pointed out experimentally its relations with the second cervical nerve.

Cases of total alopecia or so-called alopecia neurotica are much rarer. Here also trauma plays a very important influence. All other cases of total alopecia reported retained some hair either on the pubis or some part of the body so that the case reported by the author is an exceptional one. The case, however, falls into the class of alopecia neurotica.

Lay Press Notoriety of New Remedies.

Hardly a month passes without an article in some newspaper or lay magazine exploiting the wonders of some newly discovered boon to humanity in the form of a wonderful cure for some one of the many ills to which the flesh is heir. Unfortunately these articles are published before the profession has given the treatment a thorough trial and before experience has taught the limitations.

For instances, in the last few years salvarsan, the Friedman cure for tuberculosis, radium, twilight sleep and detoxinated morphine have each and all been in the limelight, and now, under the caption, "Detectives in the Blood Stream," the Abderhalden reaction is described as a method of diagnosis without parallel. All this is unfortunate to say the least. Furthermore it shows lack of judgment on the part of editors in selecting their articles, which could easily be construed into greed, since all such articles must increase the monthly circulation.

Were these articles merely interesting but harmless there would be no right to criticise, but they are anything but harmless. For instance, in the case of salvarsan, which was advertised as a one-dose cure for syphilis, many who took the one-dose with a resulting disappearance of the external manifestations, think themselves well, since the press has had little to say about the drug not being quite so wonderful as at first advertised.

The Friedman cure exploded rather quickly, but not before many unfortunate sufferers had experienced renewed hope of cure which was quickly dissipated, leaving the sufferer worse than ever.

Many thought radium a cure for any cancer, regardless of its location and the length of time it had been present. As a matter of fact, radium had been used in treating superficial malignant growths

for some time before all the newspaper and magazine notoriety, and experience had taught that at present at least it

usefulness was for superficial growths and not for deep-seated cancers. The trouble in the treatment of cancers of the stomach, uterus and other deep-seated cancers, is the early diagnosis, and by the time diagnosis is made from radium is even more useless than the knife. According to the lay press, though, the Abderhalden reaction will rapidly dissipate this drawback. However, the medical press is a little more conservative, though conservatism is not always the strong suit of medical publications.

Twilight sleep was exploited as the sleep produced by scopolamine and morphine which had to be used by some one especially trained in giving the drug. As a matter of fact, this wonderful drug, or rather, mixture, is nothing other than the well known H. M. C. mixture. H. M. C. stands for hyoscine, morphine and cactin. Hyoscine is the same as scopolamin, and cactin is said to be inert and simply added to the mixture in order to enable some firm to patent the drug under the name of H. M. C. H. M. C. has been used a great deal in place of general anesthetics and probably is just as dangerous if not more so, since when the patient "goes bad" it is in the blood and hard to remove. On the other hand the general anesthetic can be stopped at the first sign of danger and elimination is rapid.

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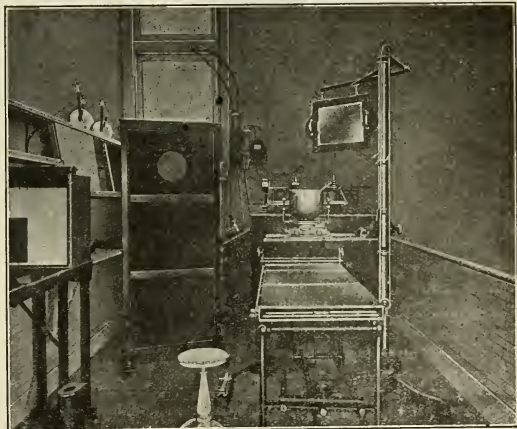
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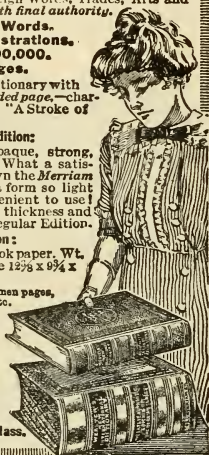
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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed, No "just as good" allowed.

and morphine, is used in labor cases. Of course it is free from danger to mother and child though, according to the lay press articles, many of the children had to be resuscitated.



SAMUEL WESTRAY BATTLE, M. D., ASHEVILLE, N.C.

The Charlotte Medical Journal

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CHARLOTTE, N. C., MAY, 1915.

No. 5

Dr. Samuel Westray Battle.

Edited by Dr. Ernest S. Bulluck, Wilmington, N. C.

Dr. S. Westray Battle was born in Nash County, North Carolina, on August 4th, 1854. He was the fifth son of William S. Battle and Mary Elizabeth, Nee Dancy.

Our subject's early life was practically passed in the country and was that of the Southern boy in the home of parents in affluent circumstances. Perhaps no life was freer and more favorable to the development, certainly physically, as it meant horses and dogs and guns, "*et id genus omne*," when not at school. It would be hard to conceive of a boy having more favorable paternal and maternal influences for good. At an early age he entered Horner's Classical and Mathematical School, Oxford, North Carolina. Thence he went to Bellevue High School in Bedford County, Virginia, and from there to the University of Virginia, where he devoted some time to the classics and then matriculated in the medical department, leaving the University of Virginia in 1874 and graduating from the Bellevue Hospital Medical College, now a part of the University of New York, in March, 1875, with the degree of Doctor of Medicine. He entered the United States Naval Service in October, 1875, as assistant surgeon, at the age of twenty-one. As a tribute to the University of Virginia and its thoroughness in medical instruction, in going before the examining board, he was asked by the chairman thereof, where he obtained his medical knowledge. Upon replying, "For the most part at the University of Virginia" the chairman rejoined, "Well sir, if it is any comfort to you, I will say that is nine points in your favor. This was indeed a comfort to a youngster who was going it alone without advices from home or friends, and standing this examination for a commission in the United States service."

He was married in 1880 to Alice Maude, a daughter of Admiral George E. Belknap, United States Navy, a distinguished officer of the service, a splendid sailor and a man of the literary and scientific attainment.

Dr. Battle served with distinction in active service in the Navy for nearly ten years, his last shore duty being surgeon

in charge of the Naval Hospital at Pensacola, Florida. In 1878 he was attached to the United States ship Marion, sailing in consort with the United States ship Vandailia, sister ships detailed to take General Grant around the world. War between Russia and Turkey breaking out early in 1878, while these ships were at Smyrna preparing to go down the coast and through the Suez Canal, their presence was required to protect American interests in the East, so they remained on the Coast of Asia Minor as long as needed and then joined the Mediterranean squadron. Doctor Battle's first duty at sea was in connection with the demonstration made by the United States following the Virginius affair. It will be remembered that the American Steamer Virginius, cruising in Cuban waters, was pursued and captured by the Spanish ship Tornado and taken into Santiago as a pirate. The crew consisted of Captain Joseph Fry and 120 men, half of whom, with Captain Fry, were executed and the bodies of the men trampled on by horses and their heads displayed on spikes. The massacre would have been continued had not the British warship Niboc, under Sir Lambton Lorraine, hastened from Kingston, Jamaica, to Santiago and threatened to bombard the city unless the murders were instantly stopped. Spain finally surrendered the Virginius and what was left of the crew, but it was a long drawn-out affair, and our ships were kept in Southern waters for several years. During this time Doctor Battle served on the United States ship New Hampshire, and in turn on the monitors Ajax, Lehigh, Catskill, Manhattan, Manhopac and Saugus. On account of injuries received in the line of duty while cruising at sea, he was placed on the retired list in 1884.

In 1885, recognizing the superior advantages of what was afterward known as the Asheville Plateau, for which name he was responsible, Doctor Battle took up his abode at Asheville, which is about the middle of a broken plateau between the Blue Ridge on the east and the great Smoky Mountains on the west. He had made a study of the meteorological reports of the United States Government, and was impressed with the fact that the Asheville Plateau was the driest atmospheric area east of the Mississippi River. Its elevation also contributed to its suit-

ability as a region peculiarly adapted to the cure of all throat and pulmonary troubles. He was not slow in conveying this information to his brethren of the medical profession residing at a distance, and before he had lived in Asheville many months the fame of Asheville climate spread abroad throughout the United States.

Doctor Battle occupied a cottage near which lived Bill Nye in a domicile described in one of his letters as of "perforated architecture," because of the many cracks and seams in its walls, through which the winter air penetrated with uncomfortable frequency and intensity. He and the Doctor were fast friends, and together they did much to herald the fame of the rising city to the world. In wit and humor the Doctor was a match for the genial humorist, and as a raconteur was superior. He remembered the best and wittiest things Nye said or wrote, and gave additional point and relish to them by his inimitable manner of telling them. Together they made the little community laugh and grow fat. Nye's letters to the World and the Doctor's to medical journals and periodicals seemed to reach every class in the United States, and there probably never was a city so well advertised as Asheville at so small an outlay in cash. And the advertisement blessed not only the town, but the authors of the good things said of it, for Nye's reputation as a humorist grew and the Doctor's practice surpassed his ability to attend to all of it. He had to secure the services of two assistants, and with their help was barely able to keep up with it, notwithstanding his most strenuous efforts to do so.

It was through his efforts that a street car line was built in Asheville. He has striven constantly to establish small enterprises in Asheville, such as furniture factories, wood-working plants and various other means of affording employment to the resident population.

While Doctor Battle was active and energetic in all these ways in the promotion of the growth of Asheville, his adopted home, it was in an entirely different field that his influence was of most importance to the Queen City of the Mountains. It was his social attributes that contributed more than any other one force to the upbuilding of Asheville. Being a man of cosmopolitan tastes, having navigated the globe as a naval officer and mixed with the populations of different countries, he saw how essentially alike are all men, and how petty and unimportant the

little jealousies and animosities which so often keep communities and individuals apart. Although a Southerner by birth and a son of one of the delegates to the Secession Convention, which took the State out of the Union on May 20, 1861, Doctor Battle chose as a helpmate for himself the daughter of a naval officer who had fought against the establishment of the Southern Confederacy, and thus made himself as much Northern as Southern. He was therefore peculiarly fitted to bring into social contact congenial spirits of the North and South in the cosmopolitan City of Asheville, composed, as it was, and is, of people from the four quarters of the earth and literally from Europe, Asia, Africa and America, not omitting Australia.

The result of his efforts to bring our Northern visitors and Southern residents together socially was a success beyond his most sanguine anticipation. Not only did these formerly diverse people meet and mingle socially with mutual benefit and enlightenment, but many a casual visitor found the South so attractive that they bought homes and are with us today, as Southern as the rest of us in everything that is essential.

It is as a physician that Doctor Battle shows to best advantage. He chose the right work in life. He is so essentially a physician as was the "Weelum McClure" of the Bonnie Briar Bush, or the "Doc Sifert" of Whitcomb Riley, and withal without any of their peculiarities. And, after all, it is as true of the physician as of the poet that he is *Nascitur, non fit*. For the essential factor in the makeup of the physician is human sympathy. That quality Doctor Battle possesses in an overwhelming degree. The sufferings and troubles of his patients are in very truth his own.

There is still another aspect of Doctor Battle's character that is especially dear to the writer of this imperfect sketch, and that is his loyal friendship to his friends. Jonathan's love for David was not greater than his for those he numbers among his friends. There is today many a wreck on the highway of life who knows of but one staunch friend left to him in his low estate and that is Doctor S. Westray Battle. Hence he is of the salt of the earth, that man possessing the essentials of the truest Christianity, love for his neighbors.

Of some of the posts held by Doctor Battle may be mentioned the following. He is medical director of the Clarence Baker Memorial Hospital and Dispensary

at Biltmore, North Carolina; Colonel and Surgeon-General, N. C. S. G.; member American Medical Association; Mississippi Valley Medical Society; Tri-State Medical (Virginia and the Carolina), Medical Society, and Buncombe County Medical Society; member of the American Climatological Association; Fellow of the Rhinological, and Laryngological Society; American Public Health Association; Association of Military Surgeons, State Board of Health and Medical Corps of the United States Navy, on the retired list.

He is a member of the Society of the Cincinnati, Sons of the American Revolution, Naval Order of the United States, and of the Army and Navy Clubs of the cities of New York and Washington, Metropolitan Club of Washington; Swannanoa Country Club at Asheville, Asheville Club, President of the Catawba Association, Vice-President of the Asheville Gun Club and member of the Mott-field Club, Georgetown, South Carolina.

There is no finer character than Doctor Battle's. Of large and commanding presence, distinguished air and polished manner, he is a striking figure in the most distinguished company. One would hardly believe that beneath the somewhat foreign appearance of this striking personality is to be found by those who know him best the plain and unpretentious Tar Heel citizen, with no false notions as to his own importance and no very exalted opinion of himself. He loves his fellow-countrymen, and is proud of all that makes the Old North State distinguished and excellent among the sisterhood of State. He is the best of all men, a good citizen, a kind friend, and good neighbor. All who know him love and respect him, and his life and example are an inspiration to all.

Anuria in Typhoid Fever.*

By Stephen Harnsberger, M. D., Catlett, Va.

Anuria in typhoid fever is interesting for two reasons: (1) Its rarity; (2) Its fatality.

Dearth of Comment. Text-books and journals pass it by with scant or no mention. Butler says, "Total suppression of urine is rather rare. In persistent total anuria death usually occurs within twelve days." One author, whose name I have forgotten, says "It is very rare and is generally fatal—always fatal after 50 years of age." One of my fatal cases

was 59. Osler: "Suppression rare. Retention frequent at times in typhoid fever." Edwards: "Uremia and suppression of urine rare and generally due to nephritis." French: "Suppression of urine rare."

Anuria in typhoid fever is a serious complication. It should be recognized early. Anuria is a condition of suppression in which no urine is passed into the bladder, that viscus being found empty on catheterization. If urine is not voided, we should always ascertain whether there is suppression or retention. If there is retention it can commonly be discovered by palpation and percussion. When in doubt employ a catheter. If suppression is from causes of a grave nature, as was the case in my patients, there will be signs of trouble, such as oedema, sinking spells, etc.

History. We had an out-break of typhoid fever on the out-skirts of our town in 1908. Four white and six colored. All drank water from the same well, and, with one exception, all who drank the water contracted the disease. One colored woman, mother of the other five, was, with one boy, sent at her request to a well conducted hospital, where she died from pneumonia. On the 16th of August (the twelfth day of her sickness) I called to see Miss R., aged 18. Her temperature was 98 degree F, pulse 80 and I felt grateful to find her so well on the road to health. Several hours later, after I had passed her house on my way home, I got a message saying she was dying. I hastened back to find her almost pulseless and with some twitching of the muscles. But the twitching I think was mostly from fright. Upon inquiry I found she had not urinated for a day or longer—she had had no nurse. Catheterization showed not retention but suppression of urine. Under normal salt solution, hot packs, etc., secretion of urine returned but she was not out of danger until about the sixth of September. My last visit was on the twenty-second. Her mother, 59 years old as stated above, would not take to the bed for several days after her temperature reached 105 degree F. Suppression of urine came on about the twenty-third of August, six days after she was put to bed. We could get secretion of urine started but suppression would follow immediately. She died on the last day of August. The next white case was in another family—a girl sixteen years of age. Temperature the first day I saw her was 107 degrees F. How long.

*Read before the recent meeting of the Tri-State Medical Association in Charleston, S. C.

it had been this high I do not know, as she had no nurse. In fact, her people did not seem to think she was sick. Her temperature remained high for several days. Dr. Powhatan Moncure saw this patient in consultation and confessed that he had never seen such a case—grave in all aspects. The fever lowered under the use of ice and the aid of a good nurse. She died on the fourteenth day after my first visit. Three days before her death, her mind was clear, tongue clean, pulse and temperature normal and she called for food. The third day thereafter, about noon, she apparently fell asleep. By 4 o'clock she was unconscious and died at six o'clock. On her chest and elsewhere on her body after death were raised places that looked something like abscesses, or perhaps more like the waxy swellings of angioneurotic oedema. As it happened, Dr. J. E. Knight was with me. We punctured the swelling in the gluteal region, which was as large as a small soup dish, but could get only a drop or two of a thin liquid of a yellowish pink color.

The other three cases were colored boys, ranging in age from 4 to 7 years. All three were oedematous from the crowns of their heads to the soles of their feet. The youngest, so his sister who nursed him told me, passed no urine for about a week. This boy was on the verge of death for some weeks. They all finally recovered.

These six cases represent my experience with anuria in typhoid fever. They were all on my hands in the same season and practically the same month. The drinking water was polluted by a convalescent visitor from Washington.

Treatment:—Colon flushings, hot packs and steam baths. The colon flushings were used every six or eight hours to lessen the hyperaemia of the kidneys and the external moist heat to stimulate the skin to vigorous action. By keeping the skin moist, the blood-vessels of the kidneys are relieved of the tension to which they are subjected and the functional activity of the kidneys is more apt to be resumed. During the suppression, digitalis was administered to two cases, one of which died.

As there are no by-products in a carbohydrate diet to irritate the kidneys, the food consisted mostly of gruels of barley, etc., with sugar and diluted fruit juices.

The Cause:—The anuria was due to faulty treatment, unsuitable diet or virulent strain of toxin—or these three

items may have acted conjointly as causative factors. I would like to know.

Report of Case of Virulent Mastoiditis Without the Usual Signs.

By J. G. Johnston, M. D., Chester, S. C.

We are so accustomed to look for certain definite and distinctive signs and symptoms in cases of mastoiditis that we are in danger of allowing them to run too long while we are looking for these characteristic signs, thereby subjecting our patients to a great deal of unnecessary suffering as well as endangering their lives. For this reason I desire to report the following case of mastoiditis that had almost none of the usual characteristic signs.

Miss R. P., referred to me by Drs. Pryor and Malone with the following history: On the night of December 18 she was taken with a severe pain in the right ear. Dr. Malone was called to see her and found her with slight temperature but suffering intense pain. No discharge from ear. Ordering some soothing drops for her ear, he saw her again the following day when she was suffering as severely as before. This condition of affairs continued until December 22 when her suffering was so severe that she was taken to the hospital and I was asked to see her.

I found her temperature normal and pulse ranging around 88. On close questioning she gave no history of ever having had a discharge from that ear and there was certainly none at this time. There was no bulging of the drum and no sagging of the canal wall. No swelling over the mastoid process or prominence of the external ear. Pressure over the mastoid tip revealed tenderness and this was very much more marked over the site of the emissary. Her general appearance was that of a very sick patient and that, coupled with the tenderness over the mastoid and the extreme headache led us to advise operation at once. The patient accepted this advice, as, according to her statement, anything was better than the suffering that she was then enduring. Accordingly she was prepared and operated on at once. On opening the mastoid no pus was found but on clearing out the cells many of them were found filled with granulations. These were all cleared out and when the antrum was reached it also was entirely

*Read before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

full of granulations. These were thoroughly cleared out but no pus was found at all. The wound was then closed, leaving a small drain in the lower angle for safety's sake. The patient was very much depressed and suffered considerably with her head for several days, but had no more pain in the ear. It was one week from the time of the operation before she could raise her head from the pillow without assistance, but when we began to get her up a little each day she improved rapidly. Her headaches gradually passed away and she has had no trouble since that time. The thing that impressed me most strongly about the case was the profound depression which accompanied or was caused by the trouble and yet so apparently small amount of trouble to account for it. I have often thought had we waited for the classical signs of mastoiditis to appear that in all probability the patient would never have survived and while it would have been easy to demonstrate the trouble and the operation might have been a success yet the patient might have died. The patient made an uneventful recovery, her temperature never going above 100 at any time, but her pulse ranged from 80 to 102, although I have since learned that this is her usual pulse rate. There was never any pus in the wound and it was entirely well in three weeks from the time of the operation.

Crotalin in Treatment of Epilepsy.*

By W. J. Chewing, M. D., The Plains, Va.

The disease to which I invite your attention for a few moments, Idopathic or genuine Epilepsy, is one that the average practitioner pays but a passing glance to, giving the patient a bromide mixture or some other sedative, and passing him or her along as having an incurable disease, but thanks to the advancement in science, and our daily increasing knowledge in diagnosis and treatment, we are better fitted to treat this condition than formerly, and to know the predisposing causes of it, and are able to help, at any rate, these unfortunates, so that life is more bearable, and the attacks are either entirely cured, diminished in severity, or the interval between the attacks, made longer.

Having had under treatment in 1912, one or two cases of this trouble, one of which had been diagnosed and treated

as auto-intoxication, without beneficial results, and acting upon the suggestion of my friend, Dr. Julius Friedenwald of Baltimore, I decided to try Crotalin, the formula used by—Spangler, of Philadelphia, in combination with a theory of my own. Crotalin is the venom of the rattle-snake (*Crotalus Horridus*.) The preparation used is one prepared by Wolf of Philadelphia, under the supervision of Spangler, which I consider the best preparation of this venom on the market. Crotalin is given hypodermically in the left arm below the elbow intra-muscular with a glass syringe and long platinum needle, this instrument being made by Burroughs Welcome Co., London, Eng. Beginning treatment with 1-400 gr. and given every seven to ten days, depending upon blood tests to determine strength of dose, whether to increase or diminish. If the eosinophilias are 10 per cent. or more, the dose is delayed from four to five days until they diminish, as Crotalin increases the eosinophilias, and the patients do best with from five to eight per cent. eosinophilias. The clotting times of the blood is also most important. We find that in epileptics the clotting time of the blood is shortened, so instead of the normal clotting time, i. e. from six to seven minutes, it is often down from two to three minutes. Crotalin acts directly upon the clotting time, lengthening it. The clotting time is taken just before administering the dose, and 48 hours afterwards. It has been proven that small doses of Crotalin are much more beneficial than large ones, and right here let me note that I have found by administration of mercury, using protoiodide from 1-12 to 1-4 Gr. daily, (of course keeping the patient under constant observation, for its effect) that a better result is obtained with the Crotalin treatment, and I think it is as important to use mercury in the treatment of epilepsy as it is indicated in the treatment of Syphilis when 606 is given. Petit mal seizures are more responsive to the action of Crotalin than grand mal. I have seen one case, adult, petit mal, attacks twenty to thirty seizures in 24 hours, much improved by Crotalin. The patient's memory, which was terribly impaired, cleared up wonderfully, and the attacks were not only controlled so as she would go without an attack for days, but the whole character of the attacks was changed from convulsions to an automatism. She would be dealing cards, and her hands would keep on for a few moments

*Read by title at the Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

putting out the cards, while her mind was for the same space blank, from which state she would wake with a slight start, and go on as if nothing had occurred. This was noticed by her nurse in any other occupation the patient would have. During administration of Crotalin, all bromides and opiates are absolutely withdrawn. If it becomes necessary from the violence of the attack to give a sedative we have in chlorotone an excellent substitute for bromides, this can be given up to 20 Grs. at a dose. It is more preferable to start with small doses, and increase if necessary. Purgatives should be given every other night to patients taking Crotalin. I get most satisfactory results from the following formula—

R	Resin. Jalap,	1-3 Gr.
	Ext. Colocynth Comp.	1-4 Gr.
	Calomel,	1-2 Gr.
	Gamboge,	1-4 Gr.

This pill comes gelatine coated from any of the large manufacturers, and the dose is from one to two pills. This acts not only on the bowels but kidneys, and causes a thorough elimination of the toxins that otherwise would go into the blood, decreasing the clotting time, and precipitating an attack.

In a study of the charts of several of the cases treated during the past two years, we find by the end of two or three months of this combined treatment a lengthened clotting time of the blood, which is most important, for while as yet we do not know why it is, still it is true that an attack does not occur when the clotting time is normal. Without referring to the histological and chemical changes in the blood, without taking into account that the blood, the most complicated and wonderful fluid in the living organism, has many other secrets hidden in it, may we not concede that the blood has a greater importance in the origin of epilepsy than has heretofore been demonstrated? To sum up, it is possible to influence the composition of the blood by the hypodermic administration of Crotalin, combined with small doses of mercury by month, and as the symptoms of epilepsy are closely related to changes in the composition of the blood, we possess in Crotalin a means that alters the condition of the blood of epilepsy advantageously. This taken with the whole systemic effect that Crotalin has, such as quieting the nervous system, building up tissues, and in fact making the epileptic a normal human being between attacks, without drugging, seems to be over-whelming proof of its benefi-

cial results, and I would ask that you give this method of treatment your consideration.

Morphine—Alcohol—Brain—Cells.

By J. W. Williams, M. D., Richmond, Va.

"The blood supply affects all parts of the body, for the most minute and remote cell has no other source of nourishment, and therefore of life than the blood. This is especially true of the brain and spinal cord, for on account of the osseous covering, not only can nourishment be received in no other way, but to a large extent the blood is the only means of injury"—Cutten, B. D., M. A., Ph. D., (Yale) p. 48.

The blood is a mixture of corpuscles (red and white) and a fluid-blood plasma. Some twenty-five years ago that eminent scientist, Prof. Mitchinikoff of the Pasteur Institute, Paris, announced to the world his discovery that the white blood-corpuscles have the marvelous power of "destroying the microbes to which so many of our diseases are due." They are the policemen of the body. If microbes invade any part of the body these white corpuscles leave the blood vessels in the neighborhood and stream to the part invaded to destroy them. The microbes are destroyed and their dead bodies along with the fluids of the inflamed tissues form "matter" or pus, and a collection of this is an abscess. Latinen has shown that in the case of drug addicts the bactericidal power of these corpuscles is lessened. The blood in these cases finally becomes so impure and so deficient in cell nutriment as to produce that condition of "extreme weakness" of which Professor Osler speaks, *Prac.* p. 385, of which many morphinists die—cell starvation. The brain is encased in a hard, bony skull to protect this sensitive organ from injury, and the only way morphine, cocaine, etc., can injure the brain cells is through the medium of the blood, and just as surely as the drug is injected into the blood by the hypodermic needle, or by mouth, just so surely does it reach the cells of the brain through the internal carotid and the two vertebral arteries and the injury to the brain cells is more disastrous, and, sooner accomplished if given hypodermically.

"Alcohol and opium entering the blood are carried by it to the inmost recesses of the brain, and act there injuriously upon the elements of the exquisitely delicate structures," Cutten's *Psychology*, p. 191. The way in which our bodies fight disease, therefore, is partly by means of

the white blood corpuscles. The reason why pneumonia comes to a favorable end is that the white blood corpuscles get the better of the germ of pneumonia. Blood is not only the medium by which food material and oxygen are brought to the cells in the various parts of the body, but it is also the only way by which waste materials resulting from cell activity are washed away. Morphine interferes with both of these processes. The elimination of effete matter from the body is interrupted by the obstinate constipation caused by the drug, as well as the elimination through the kidneys and skin, of toxins. "Alcohol taken into the stomach is quickly absorbed, and in two minutes reaches the blood, and is found in the blood fifteen minutes after the dose is swallowed"—Sir Victor Horsley, p. 194. Dr. Percy found alcohol, as such, in the brain as early as 1830-31, and Dr. Ogsten tells us that the blood of the brain of an habitual drunkard, when exposed to heat, gives off fumes of alcohol. "We discovered nearly four ounces of fluid in the ventricles having all the physical qualities of alcohol, as proved by the united testimony of two other medical men, who saw the body opened, and examined the fluid. The fluid in the ventricles ignited and burned with the characteristic blue flame of alcohol," p. 42. The principle holds good psychologically as well as physiologically that in cells of the brain subject to morphine and alcohol the suspension of cell activity begins first with the most complex and proceeds to the most simple. Notice the lethal effect of any narcotic, especially of morphine and alcohol, upon any case in practice, and observe its several stages and the organs of the body it first affects:

- 1st. The cerebrum.
- 2nd. The cerebellum.
- 3rd. The medulla oblongata.
- 4th. The respiratory and cordic centers.

All narcotics seem to follow this general law, or rule. We know that all narcotics have an affinity for fats and as fats predominate in the cells of the brain, the brain is first affected by narcotics—and the other organs in their relative order and development; the intellectual faculties are the last to be developed in man and they are the first to be influenced and injured by narcotics, especially by morphine and alcohol. This order was observed in all of the morphine and alcoholic cases I have recently treated, especially in the cases of twenty physicians, (perhaps, because they were more reck-

less in the use of the drug—morphine).

The cerebellum is the organ of co-ordination, and we have all seen the cerebellum so affected that walking was impossible because the patient had lost the power of co-ordinating the muscles of the lower limbs. The cerebrum is the organ of the highest faculties of man, and it is this organ that is first influenced by narcotics. I know of no exception to this rule. Drugs are classified according to the organs they affect. But why should podophyllin, liptandim and euonymin affect the liver; ipecac, lobelia and sulphate of copper the stomach and epsom salts and castor oil the bowels is not always clear to us. There is an "elective affinity" to which the organism is susceptible. But why this elective affinity?

401 E. Franklin St.

The Caesarean Section in Eclampsia—A Case Report.*

By Everett A. Lockett, M. D., Winston-Salem, N. C.

Mr. President, Members of the Tri-State Medical Society and our distinguished Guests:

Briefly stated, the indications for Caesarian Section are absolute and relative. Absolute in those cases in which the birth canal is mechanically obstructed, as in deformity of the pelvis;—tumor of the pelvis;—tumor of the uterus of the cervix;—cancer of the cervix and disproportion between size of the foetal head and birth canal. Under relative indications are classed those conditions which will permit of emptying the uterus by other means; but which do not necessarily take into consideration the life of the child. Now it is the purpose of this short paper to enter a plea, not for less consideration of the mother, but to emphasize the importance of a greater conservation of the life of the child.

Given a case of eclampsia, it is pretty generally accepted that the indications are to first control the convulsions with a hypodermic of morphine and anesthetic or chloral by bowel;—lower blood pressure by bleeding or the use of veratrum;—to quickly get free cathartics and diaphoresis. Then after having carried out the above procedure if the convulsions do not cease, and the urine markedly improve, to empty the uterus.

Consequently, in a case of eclampsia where the facilities of a modern hospital

*Read before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

and the services of a surgeon are to be had, and in the judgment of good men, the uterus is to be emptied, it seems to the writer to be infinitely safer, to both mother and child, not to bother with labor, requiring frequent examinations, considerable traumatism to mother and child from instruments, thereby increasing the risk of infection to mother, to say nothing of the time consumed and the prolonged anesthesia but to aseptically complete the process in a short time under one anesthetic, with the minimum risk to the mother and practically none to the child, by means of a Caesarian Section.

A Caesarian Section having been decided upon, two types are to be considered. The Extra-peritoneal, where you have reason to suspect infection of the birth canal from repeated examinations, instrumentation or death of foetus. —Intra-peritoneal where you have no reason to suspect infection. Again one of two routes is to be chosen, the abdominal and the vaginal.

The vaginal route (which may be termed a vaginal hysterotomy in place of vaginal Caesarian Section) is essentially extra-peritoneal and is unquestionably the one to be chosen where the foetus is in the earlier months of gestation (and you cannot hope to save it):—Also in the multipara, with a wide vaginal outlet, where with a moderate amount of pulling or by rapid version the child can be speedily delivered.

The abdominal route can be made either extra or intra-peritoneal and is to be chosen in all cases where the child has reached the seventh month—and is the easier of the two routes and safer to both mother and child.

In conclusion, permit me to submit the following case history of a Caesarian Section by the abdominal route. I am indebted to my friend Dr. E. P. Gray for this case. A married woman 19 years of age, first pregnancy; of a short neck, heavy set, phletoric type, was first seen by Dr. Gray on the evening of January 15th., just as she was coming out of her first convulsion. She was immediately given a hypodermic of morphine and chloroform inhalations, as soon as possible removed to the hospital and had her second convulsion in the ambulance on the way there. She arrived in the hospital in an unconscious condition, was immediately given a hypodermic of 10 drops of veratrum which was repeated in one half hour,—croton oil, drops three, calomel grs. 10 and Podophyllin grs 1-2

by mouth and a high enema of normal salt solution. A catharterized specimen of urine was obtained and it was impossible after boiling, and adding HNO₃ to pour it out of the test tube. She had no more convulsions and began to regain consciousness on the evening of January 16th., but complained of severe headache, disturbance of vision and had persistent vomiting. Free cathartics was obtained early on the morning of January 16th., and she was given hot pack every four hours for three days. Patient still complained of severe headache, was delirious and noisy at times, nausea and vomiting persistent, the urine showed no improvement, and at no time did she have any elevation of temperature. On the morning of January 20th, she began to get very stupid, in fact almost comatose and it was decided that the uterus must be emptied.

In view of the fact that she was 8 1-2 months pregnant and only one vaginal examination having been made, (5 days previous,) and she showing no signs of labor pain, a Caesarian Section was decided upon, and as no infection was suspected the (intra-peritoneal) abdominal route was chosen.

Under choloform anesthesia administered by Dr. W. M. Johnson, and assisted by Drs. Gray and Chaney, the following technique was carried out.

Abdomen painted with iodine a high incision about 4½ inches long, through the inner border of the right rectus, the abdomen was opened. The uterus was not delivered from the abdomen but was walled off with sponges, thus protecting the abdominal cavity. An incision was made rather low down on the anterior surface of the uterus so that the line of suture in uterus would be below the line of suture of the abdominal wall and thus eliminating the risks of adhesions between the uterus and the abdominal wall. After incising the uterus the membranes were ruptured and a living, six and a half pound girl delivered. Immediately the uterus contracted and the abdominal cavity thoroughly walled off, the placenta delivered and the uterus closed in the following manner. First, three interrupted silk sutures extending through metrium on either side were introduced and left untied, then the metrium was approximated by two layers of No. 2 Chromic gut sutures, the silk sutures were then tied and the peritoneum and metrium were closed by an ascending and descending baseball stitch. The few clots removed and the abdomen

was closed without drainage, as follows: The peritoneum and fascia by a continuous iodine gut, then three stay sutures of silk worm gut were introduced through the skin fascia and beneath the muscle, and left untied. The muscle was approximated with two sutures of iodine gut, the fascia closed over muscle with a continuous iodine gut, stay sutures tied, the skin approximated with gut sutures, and operation completed with the loss of no more blood than in the average case of normal labor and patient returned to bed with practically no shock and in good condition, as far as operation was concerned.

As soon as awake, continuous proctoclysis of sodium bicarbonate and glucous each an ounce, water to make a quart was continued for 48 hours. The patient was given 20 grains of soda in a glass of water by mouth every three hours, the mind was clear the next morning, headache gone, vision much improved and urine showed some improvement. She required three or four small hypodermics the first two or three days after the operation, bowels were moved by means of calomel and salts on the third day and by the morning of the fourth day the urine was normal, headache gone, vision normal and no nausea, patient hungry and well on the road to recovery. The highest her temperature went after the operation was 99.4-10 at the end of the first 24 hours. The baby was feed artificially until the fifth day when it was put to the breast.

At the end of three weeks an examination showed the urine was normal, the uterus was normal, freely moveable, and the patient was warned about the chance of trouble from a possible rupture at a subsequent pregnancy and allowed to go home.

Clinical Experiences With Phylacogen.

By H. E. Stadlinger, M. D., Buffalo, N. Y.

Biological products are, from day to day, increasing in importance as therapeutic agents. At one time of doubtful utility, they can no longer be so considered; but, on the contrary, have thoroughly established their merits in properly selected cases. This is not at all surprising when the immense amount of clinical and experimental work that is being done is considered.

The Phylacogens, the latest of these biological preparations, have apparently created a distinct field for themselves. In an acute case, with the disease becom-

ing rapidly worse, it is far more satisfactory to administer a dose of Phylacogen daily or oftener with results in a few hours than to inject a vaccine at three to five day intervals and have to wait twenty-four to forty-eight hours at the very least for an improvement of symptoms. If we may accept the evidence of laboratory and clinical workers, a vaccine produces a negative phase which lasts for a day or two and brings about a positive phase which reaches a maximum only after the lapse of several days. With the Phylacogens the cycle, while equally pronounced, is completed in far less time, and the patient is ready for a second injection at a much shorter interval. This fact, taken alone, indicates a very valuable factor in Phylacogen therapy.

There can be no doubt that the vaccines are very valuable under proper conditions, but it is only reasonable to suppose from the foregoing that their field of usefulness is more decidedly limited than that of the Phylacogens.

In considering these latter products nothing is more important than an accurate diagnosis. It is no longer sufficient to make a diagnosis of acute or chronic arthritis, probably gonorrheal, or rheumatic, as the case may be. While to distinguish them is at times difficult, it can generally be accomplished by performing the complement fixation test for gonorrhea; or, when for any reason, this cannot be done, first the Gonorrhea, then the Rheumatism Phylacogen must be administered or vice versa, thus doing what may be termed a therapeutic test. What is true in the differential diagnosis between gonorrheal and rheumatic arthritis is equally true of the other forms of arthritis; and, although it is not always so easy to distinguish them, yet such is absolutely necessary, or, at least, we must not be too hasty in ascribing failure, when it occurs, to the Phylacogen per se.

The actual technique of administration of the Phylacogen is no more difficult than that of the vaccines, or, for that matter, of that of a hypodermic injection of strychnine or morphine. This applies to subcutaneous administration. To employ the intravenous route, which is much to be preferred when indicated, a little more skill and experience is required, but it is not beyond the ability of any physician who is willing to acquire the proper method by practice and will observe careful asepsis.

A satisfactory knowledge of Phylaco-

gen dosage is also easily acquired. At one time from five to ten cubic centimeters were injected subcutaneously, the former being the primary dose; but, because of rather active and uncomfortable response on the part of the body to these relatively large doses, it is now considered advisable to begin with one or two cubic centimeters and increase one or two Cc's daily until the maximum dose of Cc. is being given.

Intravenous medication is more decisive in results, and the chill, temperature rise, increased pulse rate, nausea, abdominal pains, etc., are more constant in appearance and more marked. Any combination of these symptoms may appear, but in the majority of instances the discomfort to the patient is more than offset by the decided benefit that follows: In the presence of a failing heart, a marked valvular lesion, arterio-sclerosis or advanced nephritis, the intravenous method of medication is contraindicated and should be avoided, the physician then confining himself to the subcutaneous route and increasing the dose from day to day gradually enough so that a prostrating reaction need not occur.

Briefly given, these are the cardinal points in Phylacogen therapy. I have used these biological products with success, and believe, when properly used, they are very valuable indeed. They are in no sense "cure-alls," but scientific preparations that must be employed as intelligently and carefully as digitalis or opium, and the same amount of skill must be brought to bear in making a diagnosis preceding their administration.

As an example of what may be expected of them, I append a few case reports. It will be noticed that in the earlier cases treatment was initiated with relatively larger doses. But results were prompt in most instances, and at times undoubtedly spelled the difference between recovery and fatal issue.

Case 1. Miss E. F., aged 24. Diagnosis: Lobar Pneumonia. Patient was admitted to the hospital, February 10, 1912, with a history of having been sick for sometime with an indefinite infection of the pelvic region. She developed pneumonia February 10th, was taken to hospital; and, as she seemed to be in very grave condition, Dr. P. was called in consultation. The entire right lung was consolidated, with a central involvement of the left lung. There was pain in the side, headache, and difficult breathing; respirations were very rapid and labored with crying and moaning almost con-

stant. The pneumococcus and pus-organisms were present in sputa.

February 11.—T. 103.2, P. 156, R. 60, Pneumonia Phyl. 5 Cc. Subcutaneously, p. m.

February 12.—T. 102.4, P. 136, R. 40, Pneumonia Phyl. 5 Cc. subcutaneously, 7.00 a. m. T. 101.2, P. 112, R. 24, Pneumonia Phyl. 4 Cc. subcutaneously, 2.00 p. m. 4 Cc. subcutaneously 8.00 p. m.

February 13.—T. 102, P. 120, R. 32, Pneumonia Phyl. 2 Cc. subcutaneously, 2.00 p. m. T. 101.4, P. 112, R. 24, Pneumonia Phyl. 5 Cc. subcutaneously, 9.00 p. m.

February 14.—T. 101.3, P. 116, R. 26, Pneumonia Phyl. 5 Cc. subcutaneously. T. 101, P. 112, R. 26.

February 15.—T. 101.4, P. 92, R. 26, Pneumonia Phyl. 5 Cc. subcutaneously. T. 100.2, P. 88, R. 26.

February 16.—T. 100, P. 76, R. 26.

February 17.—T. 100, P. 94, R. 26.

The lung condition cleared up satisfactorily, but the next day she developed tonsillitis. Temperature shot up to 103 for one day, but promptly dropped again. She is still running a little temperature due to her pelvic infection.

Case 2. J. G., aged 56.

Admitted to hospital, February 12, 1912.

Diagnosis: Acute articular rheumatism.

History: Had first attack of rheumatism five years ago; present illness, second attack. Wrist and foot swollen, inflamed, and very painful.

February 16.—Rheumatism Phylacogen, 5 Cc. subcutaneously.

February 17.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

February 18.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

February 19.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

February 27.—Rheumatism Phylacogen, 5 Cc. subcutaneously.

Pneumonia Phylacogen, 5 Cc. subcutaneously.

February 29.—Rheumatism Phylacogen, 5 Cc. subcutaneously.

Pneumonia Phylacogen, 5 Cc. subcutaneously.

Patient was discharged cured.

Case 3. G. G., aged 50, male.

Admitted to hospital February 16, 1912.

Diagnosis: Acute rheumatism.

History: This patient entered the Sisters' Hospital last October with acute rheumatism. He was given one 10 Cc. dose of Rheumatism Phylacogen, but refused to have any more because of the dis-

comfort of the reaction. He has been given salicylates since that time, and when he entered the Erie County Hospital he was worse than ever. Nearly all joints were affected, knees, wrist, and ankle, in particular, being swollen, red, and very painful.

February 18.—Rheumatism Phylacogen, 5 Cc. subcutaneously.

February 19.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

February 20.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

February 21.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

February 22.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

Joints normal in size, pain gone, patient apparently cured.

February 24.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

February 25.—Rheumatism Phylacogen, 10 Cc. subcutaneously.

Discharged.

Case 4. S. S., aged 34, male.

Diagnosis: Lobar Pneumonia.

History: Patient admitted May 21, 1912. People who brought him said he had been sick for a week. Definite history impossible to obtain, as patient speaks only Polish. Lower lobe of right lung entirely consolidated.

May 21.—T. 105.4, P. 134, R. 50, Pneumonia Phylacogen 5 Cc. subcutaneously. T. 105, P. 120, R. 36, Pneumonia Phylacogen 5 Cc. subcutaneously.

May 22.—T. 105.3, P. 140, R. 56, Pneumonia Phylacogen 5 Cc. subcutaneously. T. 104.3, P. 104, R. 48, Pneumonia Phylacogen 5 Cc. subcutaneously.

May 23.—T. 105, P. 120, R. 60. T. 103, P. 110, R. 48.

May 24.—T. 103.2, P. 150, R. 50. T. 102, P. 106, R. 40.

May 25.—T. 100, P. 104, R. 38. T. 99, P. 100, R. 36.

May 27.—Temperature normal.

Rather slow recovery.

Case 5. Mr. A. A., aged 55.

Diagnosis: Lobar pneumonia.

History: Sudden onset May 3, 1912; base of left lung involved; temperature 104, pulse 108, respiration 30.

May 4.—T. 103, P. 120, 5.00 p. m. Pneumonia Phylacogen 5 Cc. subcutaneously. T. 100, P. 80, 11.00 p. m. Pneumonia Phylacogen 5 Cc. subcutaneously.

May 5.—T. 102.3, P. 100. 11.00 a. m. Pneumonia Phylacogen 5 Cc. subcutaneously. T. 100, P. 86. 11.00 p. m. Pneumonia Phylacogen 5 Cc. subcutaneously.

May 6.—T. 102, P. 96, Pneumonia Phylacogen 5 Cc. subcutaneously. T. 100, P.

84.

May 7.—T. 101, P. 90. T. 99, P. 84.

May 8.—T. 99.4, P. 86. T. 98, P. 76.

Uneventful recovery.

Case 6. T. G., aged 28.

Diagnosis: Lobar pneumonia.

History: Entered hospital May 16, 1912; gave history of having been sick one week. Was found lying in a field delirious and stupid. Temperature 105; right lower and left upper lobes consolidated.

May 20.—T. 104.1, P. 130, R. 44. 6 a. m. Pneumonia Phylacogen, 5 Cc. subcutaneously. T. 102.1, P. 108, R. 40. 2 p. m. Pneumonia Phylacogen, 5 Cc. subcutaneously; 8 p. m. Pneumonia Phylacogen, 5 Cc. subcutaneously.

May 21.—T. 103.2, P. 128, R. 48. Pneumonia Phylacogen 5 Cc. subcutaneously. T. 102.4, P. 98, R. 44.

May 22.—T. 103.3, P. 124, R. 60. Pneumonia Phylacogen, 5 Cc. subcutaneously. T. 103, P. 96, R. 44, Pneumonia Phylacogen, 5 Cc. subcutaneously.

May 23.—T. 102, P. 104, R. 46. T. 101, P. 84, R. 32.

May 24.—T. 99.4, P. 88, R. 38. T. 98.4, P. 76, R. 28.

Uneventful recovery.

Case 7. B. H., aged 24.

Diagnosis: Lobar pneumonia.

History: Patient was taken with a severe and sudden chill March 11th, 1914, followed by a sharp rise in temperature cough, severe pain in chest, and typical symptoms of lobar pneumonia. Previous to this sudden attack patient had been in usual health. I was called March 12th, thirty hours after the onset, and found the patient with a temperature of 105, with the entire left lung consolidated and acutely delirious.

Treatment.—March 13, 1914—2 Cc. Pneumonia Phylacogen were given subcutaneously, and repeated in twelve hours. March 14, two 3-Cc. doses of Pneumonia Phylacogen were given at twelve-hour intervals, the delirium cleared up within twenty-four hours after the Phylacogen treatment was begun, and on March 14, the fourth day of the disease, the temperature began to drop. March 15, two 5 Cc. doses of Pneumonia Phylacogen were given subcutaneously. The fall in temperature was steady all day. March 16, two 5 Cc. doses of Pneumonia Phylacogen were given subcutaneously. Temperature dropped to below 99 and from this time did not rise above that point. The lungs did not clear up until the 18th. The temperature dropped by lysis, not by crisis.

Three bulbs of Pneumonia Phylacogen were used. The patient made a very

prompt and uneventful recovery.

Case 8. R. O'C., aged 35.

Diagnosis: Pneumonia.

History: Patient had previously had temporary attacks of albuminuria; was taken with initial chill December 19. I was called December 20 and found patient with pain in base of right lung and a temperature of 102. Pain disappeared, but forty-eight hours later the temperature rose to 103. Two-thirds of left lung consolidated; urine loaded with albumen.

December 23.—Pneumonia Phylacogen, 5 Cc. subcutaneously, a. m. Pneumonia Phylacogen, 5 Cc. subcutaneously, p. m.

December 24.—Pneumonia Phylacogen, 5 Cc. subcutaneously, a. m. Pneumonia Phylacogen, 5 Cc. subcutaneously, p. m.

Temperature dropped to 102. Kidneys very bad.

December 25.—Pneumonia Phylacogen, 5 Cc. subcutaneously, a. m. Pneumonia Phylacogen, 5 Cc. subcutaneously, p. m. Pneumonia Phylacogen, 5 Cc. subcutaneously, p. m.

Temperature remained about 102, but patient died December 26, from kidney complications.

Case 9. Patient: A. McN., aged 26, single, boiler-maker.

Diagnosis: Pneumonia.

Onset of present illness, February 21, 1913. Chills and fever, pains in chest, diarrhea. Temperature on admission February 26, 1913, noon, 103.8 F.

February 26, 1913, 6 p. m.—2 minims Pneumonia Phylacogen, intravenously. No chill.

February 27, 1913, 4 a. m.—T. 103 F. 8 a. m., T. 104.6 F.

February 28, 1913, 4 a. m.—T. 103 F. 11 a. m., 4 minims Pneumonia Phylacogen. No chill. 4 p. m., T. 103.8 F. Resp. 60.

Patient had great difficulty in breathing, respirations very rapid and shallow, pulse rapid and weak. This condition lasted for about one-half hour after which the patient felt quite worn out and weak.

March 1, 1913, 10 a. m.—4 minims Pneumonia Phylacogen. Temperature dropped by lysis.

March 2, 1913, 9 a. m.—4 minims Pneumonia Phylacogen.

Patient in good condition, sleeps well, feels very comfortable during the day, appetite fine. Patient recovered.

Case 10. J. O'N., aged 70.

Diagnosis: Lobar pneumonia.

Admitted April 11, 1913.

April 11, 1913.—Temperature 104.2, Pulse 118, Res. 28.

April 12, 1913.—Temperature 103.2, Pulse 112, Res. 28.

April 13, 1913.—Temperature 104.6, Pulse 112, Res. 32. Pneumonia Phylacogen, 1 Cc. intravenously.

April 14, 1913.—Temperature 101.8, Pulse 112, Res. 32. Pneumonia Phylacogen, 1 Cc. intravenously.

April 15, 1913.—Temperature 103.4, Pulse 118, Res. 32. Temperature 98.6, Pulse 80, Res. 24.

April 16, 1913.—Temperature 102.4, Pulse 92, Res. 30. Temperature 99, Pulse 82, Res. 24.

April 17, 1913.—Temperature 105, Pulse 128, Res. 32. Pneumonia Phylacogen, 1 Cc. intravenously.

Case 10.—Temperature 98.4, Pulse 72, Res. 24.

Temperature went to 100 next day, then dropped to normal and remained there, followed by rapid recovery.

Case 11.—Patient, F. F.

Diagnosis: Mixed infection, systemic.

History: Attack began with wandering pains in joints and muscles with fever. Patient was at home for two weeks with slowly increasing temperature and general aggravation of symptoms, when he was taken to hospital February 21, 1913. His temperature rapidly rose until on February 23, 1913, it reached 106.4. The patient, being in serious condition, was given 2 minims Mixed Infection Phylacogen, intravenously. The temperature immediately began to drop and in four hours had arrived at 100. The next day the highest temperature was 102, and the patient was given another 2-minim dose, intravenously. The temperature dropped to normal and the case ended in recovery. A total of seven 2-minim doses was administered.

Case 12.—Patient, T. D., aged 45.

Diagnosis: Lobar pneumonia.

Admitted to hospital April 27, 1913.

History: Patient entered hospital delirious and with a temperature of 103. One hour later the first injection of Pneumonia Phylacogen was administered. Delirium lasted nine days but was not increased by Phylacogen injections. The patient was alcoholic.

April 27, 1913.—Temperature 106.4, Pulse 130, Respiration 46. Pneumonia Phylacogen, 1 Cc. intravenously. Patient entered with a temperature of 103, which rose to 104.4, when the phylacogen was given. Later the temperature jumped to 106.4 and the patient became delirious.

April 28, 1913.—Temperature 100,

Pulse 100, Respiration 28. Pneumonia Phylacogen 1 Cc. intravenously. Temperature 106.8, Pulse 130, Respiration 40. Temperature was 100 in the morning, rose to 105 in the afternoon when phylacogen was given, and later increased to 106.8.

April 29, 1913.—Temperature 99, Pulse 96, Respiration 26. Pneumonia Phylacogen 1 Cc. intravenously. Temperature 100, Pulse 100, Respiration 28.

No more phylacogen was given; temperature did not rise again, but delirium continued for several days.

Recovery was complete.

1 N. Pearl St.

The Arterial Function and the Circulation in Ancient Rabbinic Literature.

By S. Mendelsohn, LL.D., Rabbi Congr. Temple of Israel, Wilmington, N. C.

It is generally believed that, down to the advent of William Harvey, the real function of the arteries was unknown. The latest to charge such ignorance even to the votaries of Aesculapius is Dr. J. Howell Way. He declares:¹ Galen's "description of the principal arteries of the human body is very good; but of course, finding them empty *post mortem*, he persisted in his belief that they were merely air tubes," and the profession slept in similar ignorance for fourteen hundred years, until William Harvey demonstrated their true function as blood carriers." Notwithstanding the Apocryphal saying, 'Only he that sinneth against his Maker, will challenge a physician,'² I venture to differ with him. I believe that the function of the arteries as blood carriers was well known to Rabbis in Palestine and in Babylonia at least fourteen hundred years before Harvey demonstrated it scientifically.

While singing the praises of the ancient Rabbis may evoke an echo of the Roman's allegation, *Omnis amans amens*, no one familiar with their works doubts that they knew many things of which their alien predecessors and contemporaries, whose fame has come down to us and will be transmitted to the latest generations, had no conception. For example, according to a Talmudic story, dating from about fifteen hundred years before the advent of Newton who is believed to have been "the first to submit the motion of a comet to calculation," Rabbi Joshua ben Hananiah had calculated and determined the periodic reappearance of a comet that was apt to mislead sailors,³ and which Rapoport identifies with the one now bearing the name of its latest

discoverer—Halley.⁵ His contemporary, R. Gamaliel, made use in his studies of nature, of a prototype of the telescope,⁶ the invention of which is never dated earlier than the sixteenth century. Mar Samuel Yarhinaah (familiar with the lunar cycle, astronomer, flourished in the third century) professed to be 'familiar with the paths of heaven (the courses of the heavenly bodies) as with the streets of Nehardaah,' his native town. And yet they did not study astronomy as such. They studied that and other sciences for the aid which the sciences afforded them in their specialties⁸—Religion, Ritualism, Law. They studied astronomy in order to be able to regulate the division of time and to determine the new moon days and the festivals. They studied geodesy in order to be able to determine the limits within which one may move on the Sabbath, without transgressing the rules of Sabbath repose. With similar ends in view they studied other sciences. They studied animal anatomy and physiology with the purpose, not of becoming expert veterinarians, but of ascertaining what fractures or what diseases in an animal prove fatal, in order to caution their coreligionists against partaking of the meat of an animal so fractured or so diseased.⁹ In this way they acquired much useful information, much more than was possessed by their contemporary therapists or by those who practiced the healing art among other nations. Their multifarious discussions in connection with sacrificial precepts, dietary laws, uncleanness and purification, preserved in the folios of the Talmud and kindred compilations, demonstrate this.¹⁰ But while the sciences contributed much towards establishing Rabbinic law, criminal and ritualistic, they are noticed by the Rabbis incidentally only and very concisely.¹¹ The scholar needed no detailed explications, while the sciolist would not comprehend them.¹² Therefore in framing their ritual laws the Rabbis chose general terms best understood by the average man. And from certain ritual laws, framed in such manner and by men of such mental calibre and strenuous application, it is proposed to demonstrate that the Talmudists, much more than a thousand years before the birth of Harvey, knew the function of the arteries.

The prohibition of blood for internal use, emphatically and repeatedly enunciated in the Pentateuch (Gen. ix:4; Lev. iii 17, vii 26, xvii 10, xix 26; Deut. xii 16, 23, xv 23) was heeded by the Jews

throughout all ages, and by the early Christians also, so that Paul enjoined even Gentile converts "that they abstain from the pollution of idols, and . . . from blood" (Acts xv 20, 29; cf ib. xxi 25). The Rabbis amplified and intensified the injunction. They aimed to prescribe rules calculated, not only to carry out the Biblical prohibition of blood abstracted from the animal, but also to prevent the possible absorption of remnants of the forbidden fluid in the meat of the animal.¹³ How to eliminate every trace of blood from the animal for the Jewish table was therefore one of their most arduous studies. At last—aided by the combined results of their investigations and deliberations,¹⁴ of their experimentations and tests in the domains of physiology and anatomy¹⁵—they reached the conclusion that "the cervical *Shehitah*," by which is meant the transverse division of the trachea and the esophagus together with the Veridin (blood vessels) would drain off the blood quickly and thoroughly.¹⁶ This they enacted into law, at the same time insisting on the severance of the said parts from the front. Cutting from the back renders the animal ritually unfit for food.¹⁷

This conclusion is suggestive. The object of the *Shehitah* being the slaughter of the animal¹⁸ and the draining of its blood, why insist on the severance of the organs fronting the cervical vertebrae—would not the same results be reached by the division of the vertebral bloodvessels? Physiologists may answer, 'Certainly, but not so well,' i. e., death would surely follow the division of the vertebral arteries, but not so quickly as when the anterior parts are severed. The animal would bleed to death, but the process would be comparatively slow, and all or most of time the victim would retain more or less consciousness,¹⁹ and consequently feel the death throes. The frontal blood vessels, being larger and carrying more blood than the dorsal, would continue to spout considerable blood into the cerebral centres, and thereby prolong life and agony. On the other hand, when the frontal blood vessels are severed, the brain is deprived of three or four times as much nutrition as the dorsals can supply, consequently consciousness and life may continue only one-third or one-fourth the time;²⁰ for even the small amount of blood that might be carried onward to the brain by the vertebral arteries, would run immediately to the place of least resistance—the gaping ends of the larger blood vessels.

Again, physiologists will doubtlessly recognize in this same Rabbinic conclusion a measure calculated to subserve the ends of humanity. They may even accord the ancient Jewish "legalists" a meed of admiration for their discrimination manifested and utilized for the benefit of the dumb creature long before civilization struck a sympathetic chord in the hearts of the lords of creation, prompting them to organize Societies for the Prevention of Cruelty to Animals.²¹ Still they may not see how all this evidences a knowledge of the true function of the arteries on the part of the ancient Rabbis; and none can blame them for hesitating, or even flatly refusing, to credit an assumption which would assign that knowledge to a period many centuries before Harvey's discovery of the circulation of the blood, when even the medical "profession slept in ignorance" of that function. Appearances are confessedly against this assumption, particularly so when we consider that they to whom such knowledge would be credited, had not even a vocabulary denominating the individual parts of the vascular system. Indeed, they called blood vessels, nerves, sinews, tendons—all the cordlike structures in the animal—Giddin or Hutin, i. e. threads!²² But "actions speak louder than words," and it is from their actions or enactments that we purpose to judge of their knowledge.²³

The Rabbis were not satisfied with framing laws to regulate the *Shehitah*, and then leave it to the slaughterer (*Shohet*, *Tabbah*) to take it for granted that every time he draws the knife across an animal's throat he dutifully complies with those laws. Those laws ordain the severance of the trachea and the esophagus together with the Veridin; they limit the space within which the incision may be made; they designate landmarks by which the *Shohet* is to guide himself in the operation; e. g., the incision in the trachea may be made, above, up to the *Pomum Adami*, and below, down to an imaginary straight line leading from that organ to the highest point reached by the uppermost (apical) lobe of the inflated lung. If the incision is made outside of these borders, the animal is ritually considered mutilated and unfit for food.²⁴ Finally these laws make it obligatory on the *Shohet* to inspect the organs after cutting them, to convince himself that they really are severed, or that at least the major part of each of them is.²⁵ The neglect of this rule renders the animal ritually forbidden, even where the *Sho-*

het is an acknowledged expert in his profession.²⁶

In view of these regulations no physiologist can doubt that the Shehitah involves the carotid arteries as well as the trachea and the esophagus and the jugular veins; and I venture to claim that, if no other clue, the obligatory inspection of the incised organs must have led to the discovery of the true function of the arteries.

Dr. Way tersely and intelligibly accounts for the misbelief of the ancient anatomist relative to the function of the arteries, stating, "Of course, finding them empty post mortem, he persisted in his belief that they were merely air tubes." Reasoning from this explanation, one may rightly argue *per contra*, had the anatomist carefully inspected them before life was extinct, before the advent of rigor mortis, while the body was still warm and the red fluid flowed in its natural state, he would doubtlessly have noticed that they were spouting blood; and this is just what the Rabbinic method of slaughter requires the slaughterer to do. He was forbidden unnecessarily to delay the inspection, lest he forget it altogether, and to obviate the suspicion that the epileptoid convulsions preceding death aided in completing the required depth of the incision.²⁷ Hence the inspection took place before prolonged suspension of the circulation deprived the blood vessels of their natural contents; and accordingly the Shohet saw the organs while there still was vitality in them, and the severed blood vessels while they still poured forth blood—is it unreasonable to assume that he perceived blood gushing from four gaping tubes? Could he then believe that either one of these profusely bleeding tubes was a mere air tube? Unless he was physically or mentally blind, the conviction that he had cut in the animal's neck four large blood vessels could not escape him; and neither the physically nor the mentally blind was ritually favored as Shohet.²⁸ The Shohet had to have good eyes and good light.²⁹

Assuming, then, that the practicing Shohet did not, because under the circumstances he could not, fail to perceive the obvious function of all the gaping blood vessels, we may further assume that in the flux from the blood vessels he distinguished two colors, one florid red approaching scarlet, and another dark crimson. The latter he saw on other occasions—perhaps in phlebotomy which, in those days, some physicians considered to be a monthly prophylactic necessity,³⁰ and which had been performed by or

on himself; but the scarlet colored blood was to him a rare sight, and here that color predominated. Is it not reasonable to suppose that, puzzled at first, he eventually discovered that the brighter blood flowed from the two severed conduits which were popularly believed to be merely air tubes (*arteriae*)? Considering the opportunities which the Shohet had for observing this phenomenon, one must, *audacter et sincere*, admit that it would indeed have been stranger than strange had he failed to acquire a correct conception of the arteries as blood carriers.

In emphasizing the Shohet's duty to inspect the divided organs, and considering it as an unfailing means leading up to the knowledge of the true arterial function, it is hardly necessary to sound a note of warning against a possible misapprehension that the professional Shohet was the sole possessor of that knowledge. Indeed, that he acquired it was nothing more than the result of his faithful compliance with the Rabbinic regulations relative to his profession; the regulations themselves, however, were framed by Rabbis in accordance with previously acquired knowledge.³¹ Were it otherwise, many of their judiciary acts in which medical jurisprudence largely enters would be inexplicable. For example, consider the following case.

The Mosaic Law prescribes that the brother of a married man who died without issue should marry the widow, and forbids the widow to marry a stranger, if her levir is willing to marry her. The levir may refuse to marry her, though not without subjecting himself to public dishonor; but the widow has no choice in the matter (cf. Deut. xxv 5, et seq.) Now, a childless married man is assaulted and suffers an injury to his throat and gullet. He realizes that his end is nigh and he knows that, as soon his end will come, his wife will become subject to his brother. This he wishes to prevent, but how? by what means? By means of a bill of divorce. But only the living can execute such a bill, while this man, his vital organs having been cut, is in a dying condition, almost dead! Nevertheless Rabbinic legislation authorizes the immediate execution of this man's wish, 'he being still alive, though his injuries must eventuate in his death.'³²

Another case.—Scripture provides for the designation of cities of refuge, whither the accidental slayer of a human being might flee for protection against the avenger (cf. Ex. xxi 13, et al.) In post Bibli-

cal times the internment of the accidental slayer assumed the name and, partly, also the character of banishment, and was really the penalty of bloodshed through negligence. This penalty was remitted in case the victim of the accident did not die immediately after receiving the injury, or where there appeared likelihood that some adventitious complication contributed to the fatal termination.³³ Now, a person handles an instrument with which, by mischance, he cuts into another's trachea and esophagus, and the victim dies—is that person subject to internment, or not? Rabbinic law declares him free from the penalty. In such cases the Rabbis assume that the immediate cause of death was not the accidental cleaving of the organs, but some other agency, as a sudden influx of air into his lungs (asphyxia), or that the victim himself by his contortions exhausted his strength and hastened the fatal termination.³⁴

Contrast these Talmudic decisions with the Talmudic rule permitting the gormand to satisfy his inordinate craving for "live meat" (meat in the ante mortem condition) by cutting off a segment from the gaping neck. He may do so while the slaughtered animal still shows signs of life, although he must repress his appetite for the time being and until the animal's life is wholly extinct.³⁵ Considering the Rabbis' great solicitude to prevent cruelty to animals,³⁶ this permissive rule can be justified only on the assumption of their acquaintance with the physiological fact that, within very few seconds—"three to five," declares Dr. Dembo³⁷—after the Shohet's performance of the Shehitah, the animal is practically dead; and yet they consider the man whose vital organs have been cut, a legal person and competent to dissolve the marital bond, in the one case, a victim of nature or a quasi suicide and therefore incompetent as a corpus delicti to condemn his accidental slayer to internment, in the other case! This apparent inconsistency, however, is the result of scientific differentiation. While in the two juridical cases the victim's throat and gullet are incised, in the ritual case the blood vessels also are severed. In the juridical cases the Rabbis knew that, even if not curable,³⁸ the victims would die a comparatively slow death; in the ritual case, the Shohet having performed his part properly: having severed the large blood vessels as well as the throat and gullet, the Rabbis knew the animal is deprived, almost instantaneously, of consciousness and sensation.

The study of the Rabbinic regulations relative to the Shehitah not only convinces me that the authors of many of those regulations were cognizant of the true function of the arteries, but also arouses the thought that while the Rabbis may not have been accomplished angiologists, they had an idea of existing communication (anastomosis) between the veins and the arteries. Dr. Way cannot account for Galen's failure in this instance. He declares, "Why Galen failed to discover the circulation of the blood has always been a puzzling thought to me." This he declares in the face of his own statement according to which Galen knew the function of only one-half of the blood-vascular system, since he is said to have believed that the arteries were merely air tubes. What then could account for a like failure on the part of the Rabbis, they having known that the arteries as well as the veins are blood carriers? Only a lack of the perceptive, thinking and reasoning faculties in their make up; and this no perceptive, thinking and reasoning student of their ethical and judicial ratiocinations will ascribe to them. However, in view of the regulations hitherto adduced and considered, and of the conclusions deduced therefrom, there is no such dilemma present. The originators of the rule requiring the severance of the Veridin knew that all the flowing blood in the animal passes out through the gaping blood vessels of the neck, and therefore must have realized that there is some channel through which the blood coursing in the veins and in the arteries, is carried into and out of the Veridin.

The originator of record in this important instance is R. Judah ben Ilai, a Palestinian, senior contemporary of Galen. He maintains, "The Shehitah is perfect only when the Veridin are cut."³⁹ About a century later, a Palestinian Rabbi cautioned his Babylonian mates: "Take heed to the Veridin as ordained by R. Judah";⁴⁰ and to this day observant Rabbinites, and even Karaites, heed this injunction. But what are the Veridin? The Mishnah, the Gemara and all other ancient Rabbinic works fail to tell us what the term Veridin really designates; and although there can be no doubt of its referring to blood vessels and, accordingly, Rashi (R. Solomon Isaaki, of Troyes (1040-1105) defines it as cervical threads (i. e. tubes) which spout blood,⁴¹ we still do not know which particular threads or blood vessels are meant. The latest Rabbinic lexicographer identifies Varid (sing. of Veridin) with Yarad (to

descend), and understands by it "the jugular vein, leading from the head to the heart";⁴² the context, however, points to the carotid arteries. R. Judah's phraseology, as preserved in the Tosefta,⁴³ 'declaring all slaughterer ritually defective, unless the esophagus and the two Veridin are severed,' indicates adjacency of that organ and the Veridin, and a Talmudic topographic-anatomical remark plainly states that "the esophagus adjoins the Veridin,"⁴⁴ which cannot be properly said of the esophagus and the jugulars. And as a matter of fact it may be stated that, when the animal is stretched on its back and its face is forced outward and downward on a line with the body, as it always is preparatory to the Shechitah, nothing is more certain to be cut simultaneously with the esophagus than are the common carotids.

The severance of the Veridin—carotids—ordained by Galen's senior contemporary as a *sine qua non* in ritual slaughtering was recognized by all Talmudists as the opening of the main channels by which the animal's blood could pass out. Even those who apparently could not comprehend the humane motive of the prescription—the prevention of a lingering death⁴⁵—did not fail to appreciate its ritual importance for draining the blood.⁴⁶ Can this be explained otherwise than by the assumption that the Rabbis, at least some of them, had an idea of the existence of some circulative medium or media by which the blood from the veins could enter into and pass out through the Veridin?

Again, not only did the Talmudists consider the opening of the Veridin all sufficient to drain the animal's blood, they moreover objected to the opening of any additional channels by which blood could escape. Thus they seriously objected to the division of the whole neck,⁴⁷ although in such case the vertebral arteries also would be opened. If the Rabbis had not been convinced that all veins and arteries are in some way connected with the Veridin, and that all venous and arterial blood will pass out through the gaping Veridin, they would not have disapproved the opening of additional channels for the discharge of blood. Hence a knowledge of the existence of communicating channels between all veins and arteries must be assumed as a necessary precursor of R. Judah's rule.

Leaving the Talmudical academies of Palestine and of Babylonia for the Rabbinical schools of Spain and traversing

the centuries intervening between R. Judah and Harvey, we meet with Rabbis who employ this physiological fact in explaining a dietary law only partly connected with Shechitah. In treating of the "sinew that shrank" (*nervus ischiadicus*—Gen. xxxii 32), the Talmud adduces regulations relating to many other parts of the vascular system, and states: "There are five hutin (threads, tubules) three of which are taboo as forbidden fat (cf. Lev. iii 17 et al.) and two because they retain blood. Of the three one is in the spleen, one in the loin and one in the kidney; of the two one is in the foreleg and one in the jaw. The practical difference between them is: Those tabooed because they retain blood, gashing and salting make ritually fit for food, while for those forbidden as fat there is no remedy."⁴⁸ Post Talmudic celebrities attempted to explain the reason for singling out "the two," but R. Nissim Gerundi (flourished in Barcelona, 1340-1380) points out flaws in their explanations, and offers as a solution of the crux interpretum this reason: "Although the other hutin in the body are considered bloodless after the section of the Veridin, those of the foreleg and of the jaw do not empty through the Veridin, therefore the section of the Veridin does not affect them."⁴⁹ Does not this plainly say: All sanguiferous vessels, except those of the foreleg and of the maxillae, communicate one with another?

And R. Nissim Gerundi was not the first who advanced this scientific explanation, although his learning as a physician as well as in Talmudic lore may have aided him, independently of others, towards discerning the mental process by which the ancient authors were led to enact the rule he thus explains. However, he had a predecessor in this line. R. Solomon ben Adret⁵⁰ (1235-1310, also of Barcelona) whose fame as a Rabbinical authority was such that he was designated as *El Rab d' España* (the Rabbi of Spain), anticipated Gerundi by many decades and expressed himself even more plainly and scientifically. Having pointed out, as does Gerundi later, the flaws in the explanations of his predecessors, Ben Adret concludes thus: "Therefore it appears to me that the Talmudists treat (of the two hutin) of an animal whose Veridin have been cut, and that they make an exception of these two hutin, because these two are not emptied through the Veridin, they not being connected with them; but all other hutin in the body discharge into and empty by way of the Veridin."⁵¹

Now, these two medieval Rabbis flourished a long time before William Harvey was born (1578), they died respectively 318 and 248 years before Harvey published (1628) the discovery of the circulation of the blood; R. Judah ben Ilai, Galen's senior contemporary and author of the Veridin proviso, flourished over fourteen hundred years before Harvey. Did these Rabbis, or either of them, anticipate Harvey's discovery? To my mind, a consideration of their ritual laws, their incidental remarks and their phraseology seems surely to indicate their common knowledge of the true function of the arteries, and, on the part of at least R. Solomon ben Adret and R. Nissim Gerundi, a vague anticipation of Harvey's discovery.

The intelligent layman might now raise this question: Why did the Rabbis specify the severance of the two organs—the trachea and the esophagus—as a *conditio sine qua non* to render the animal's meat permissible for food; why did they not rather specify the opening of the Veridin, which, as has been demonstrated, they considered to be the real factor in the perfect Shehitah? The learned professional, however, will readily understand that in wording the law as they did, they made it sure that the conscientious Shohet will have no trouble in performing his part perfectly. They did not intend to teach physiology or anatomy. Their sole intention was to frame a ritual law, and to frame it intelligibly. Had they specified the severance of the Veridin and failed to mention the organs, only an adept in anatomy could have undertaken to carry out their prescription; while specifying the organs known to the average man, and telling where to cut and how deep to cut, they made it sure that any one who will follow their directions, will infallibly comply with the spirit as well as with the letter of their law: he will surely strike the Veridin—i. e. the carotid arteries—in cutting the organs specified.

And that this was their idea is evidenced by the phraseology of their regulations relative to the Shehitah. Only when speaking of either of the two organs, in contradistinction to its mate, do the Rabbis use the technical designation Kaneh (reed, tube—windpipe) or Veshet (stretcher, canal—gullet), while generally they designate both as Simanim (signs, marks, directors) by feeling of and cutting into which the operator will surely and easily accomplish the ritualistic part required of him.

(1) "President's Annual Address: The Evolution of Medicine, etc." by J. Howell Way, M. D. Transactions of the Tri-State Medical

Association of the Carolinas and Virginia, 1912, p. 104, et seq.

(2) Possibly, in his earlier years, Galen hesitated to disturb the popular belief that the arteries were merely air tubes. Considering the animus of his people against attacks on popular notions; that, i. e., Socrates had to quaff the poisonous cup for advancing unpopular beliefs, we cannot blame the idolized paradoxologous (wonder-speaker) and paradoxopoeus (wonder-worker) for hesitating to proclaim what his jealous confreres would have condemned as revolutionary theories. Eventually, however, he overcame his fears and published his views. William Smith (Dict. of Greek and Roman Antiquities, s.v. Arteria) writes: "Notwithstanding the opinion of many of the ancients, that the arteries contained only air, it is certain that the more intelligent among them knew perfectly well, 1. That they contained blood (Aretaeus, p. 209, 303, where arteriotomy is recommended,) and even that this is of a different nature from that which is in the veins (Galen, De Usu Part. Corp. Hum. VII. 8). Galen, from whom the last idea is obtained, calls the pulmonary artery Phelps Arteriodes, because it conveys venous blood, although it has the form of an artery, etc." He "regarded the arterial blood (charged with 'vital' spirits) and the venous blood (charged with 'natural' spirits) as ebbing and flowing, back and forth, through their respective channels, but having no connection with each other, except through the interventricular pores" (F. H. Garrison, History of Medicine, Philadelphia and London, 1914, p. 79n). A century before Galen, Philo believed that veins and arteries carried air and blood, air predominating in the latter, and blood in the former (Quest. et Sol. in Gen., Sermo II. 59; quoted in Drummond, Philo Judaeus I. 321). —S. M.

(3) Ecclesiasticus XXXVIII. 15, according to the lately discovered Hebrew version, edited by Prof. Strack, Berlin 1908.

(4) Horayot 10a.

(5) Cf. Jewish Encyclopedia, s. v. Astronomy, II. 249b.

(6) Erubin 43b.—He also had charts of the moon, by which he tested the reports of the observers, (Rosh ha-Shanah II. 8).

(7) Berakot 58b.

(8) R. Eleazar ben Hisma, another contemporary of R. Joshua who considered him 'able to estimate the number of drops contained in the sea' (Horayot 10a), thus differentiates between religious and secular studies: The laws concerning bird-sacrifices (Lev. XIV. 4, 22, 49) and concerning women's incipient uncleanness (ib. XV. 19) although apparently of minor importance, are elements of the Law, while astronomy and mathematics are only (relishes, appetizers) preparatives of wisdom (Abot III. 18; cf. Bertinoro and Tosefot Yom Tob ad 1).

(9) Cf. Arsene Darmesteter, "The Talmud," Philadelphia 1907, p. 26 et seq.

(10) Hence, speaking of their general knowledge, Judah ha-Levi (or Abu al-Hassan al-Levi, ob. ca. 1150), a poet, philosopher and physician, of Toledo (Spain,) shows that the Rabbis were, not only abreast with, but far in advance of the scientists of their times. He writes: "Whatever elements of these sciences were embodied in the Talmudical law codes were protected and preserved by the zeal of many students. To these belong everything appertaining to the rules of slaughtering cattle, and the conditions that render the meat forbidden. A large amount of this remained

unknown to Galen. If this were not so, why does he not mention easily recognizable diseases to which the Law calls attention? Among these are diseases of the lungs and heart; growths on the latter and on its sides; adhesions of the lobes of the lungs, deficiency or redundancy of the same, or when they are dried up or lacerated, etc. (Kuzari IV. 31; English edition, Kitab al-Khazari, London 1906, p. 243).

(11) The Rabbis generally followed their own pedagogic rule, "One must teach his pupil the shortest way" (Pesahim 3b).

(12) It was not customary among the ancient Rabbis to publish the reasons for their ritualistic decrees before the expiration of a twelve month from the time of enactment, 'lest there be such as could not comprehend them and might disregard them' (Abodah Zarah 35a).

(13) Even the depleted blood vessel of a ritually slaughtered animal must not be eaten, unless it has been roasted on fire, or dissected and salted before boiling, in order to deprive it of all possible remnants of blood (Hullin 93a). When a piece of bread is tinged with blood from the eater's gums, the bloody part must be scraped off. The blood of locusts and fishes is not forbidden so long as it stays in the meat; but when abstracted from the meat, even this is forbidden (Keritot 21b; cf. Aaron ha-Levi, Ha-Hinnukh 148).

(14) There is no evidence that the Rabbis ever attempted vivisection; their tender feeling for the dumb creature (cf. note 21) probably forbade that. Dead animals they doubtless did dissect (cf. next note) and there is on record at least one instance which shows that they engaged in human anatomy also.—The Mishnah (Ohalot I. 8) states that the human skeleton consists of 248 members.—"Once disciples of R. Ishmael (first and second centuries) dismembered, by boiling, the corpse of a courtesan condemned by the Roman authorities. On close examination they found in that body 252 members. When the master was informed of their discovery, he remarked, Perhaps you dissected a woman's body? A woman's sexual organs have two sockets (ventricles) and two doors (valves) which in man are supplied by mere muscular formations" (Bekorot 45a).—Anatomists may find the Mishnahic accepted number of 248 inaccurate; but remembering that "the number of bones in the skeleton of an animal varies with age, owing to the fusion during the growth of the skeletal elements which are separate in the foetus, or young subject" (Sisson, Veterinary Anatomy, p. 19); that the ossification of a human vertebra begins in early infancy and does not end before the thirtieth year, when the several centres become united and form one bone (Gray's Anatomy, p. 150), the discrepancy between the Mishnahic number of skeletal parts and the modern established count might be attributed to the age of the subject whose skeleton formed the basis of the Rabbinic computation. But be this as it may, both the dissection of the skeleton and the numbering of the skeletal parts show that the Rabbis studied human anatomy.

(15) Several Rabbis are specifically designated as "experimenters." One of them is R. Simeon ben Halaftha.—Complete molting was considered fatal to the fowl. Simeon experimented and proved that, with proper treatment, the molted fowl will regain its indumentum, and may produce even a larger growth than before (Hullin 57b). He is credited also with making experimental studies of the habits

of the ant, to vindicate Solomon's statement (Prov. VI. 7) that "it had no guide, observer or ruler;" and he succeeded (Hullin l.c.). Other experimenters on similar lines are also mentioned (Lev. R. XIX. 1 XXII. 4; Kohelet R. to V. 8).—A case is recorded of a woman charged with infidelity. As indices of her guilt a cloth, with stains resembling those of sperma, was produced. A disciple of Shammai (first century B.C.E.) reminded the court of the master's theory that, when exposed to heat, white of egg hardens and sperma darkens. The test was made, and the woman was found not guilty (Gittin 57a). Abba Arika, better known as Rab, spent eighteen months among herdsmen, to learn by observation which of the external blemishes of an animal are permanent and which are transient (Sanhedrin 5b). His colleague, Samuel the Astronomer, learned by careful observation that the semblance of a wrinkle under a girl's breast, when she turns her hand backwards, is a sure sign of her puberty. The subject of his observation was his slave whom he compensated for her extraordinary services, saying, while Scripture (Lev. XXV. 46) privileged him to hold her in bond, the exposure of her person was not authorized (Niddah 47a). He appears as the discoverer of several animal diseases (cf. Hullin 42b, 50b, et al), and he is credited with the invention of a far famed eye-salve known as "Mar Samuel's Collyrium" (Shabbat 108b). He and Rab discuss an injury to the aorta, when the latter declares that the slightest perforation thereof is fatal to the animal; and in this connection R. Nahman is quoted describing the principal branches of the aorta: the aorta proper entering the heart, the other entering the lungs (Galen's Pheps arteriodes,) and the third entering the liver (the vena cava.—Hullin 45b). R. Jeremiah bar Abba investigates vascular plexuses (ib. 57b).

(16) Hullin II. 1; id. 27a et seq.—The term Shehitah is derived from the Hebrew verb Shahat (to slay, mostly animals;) and because it appears also in the sense of drawing (metal, by beating), Shehitah means slaying by drawing (the knife). The Talmud furnishes many such word-plays intended to prove the Biblical basis for the Rabbinic method of slaughter; but it concludes with the admission that they are only mnemonic aids, while the Shehitah itself is an ancient traditional institution (ib.).

(17) Hullin I. 4; id. 19b.—The Karaites also, anti-Rabbinic as they are, follow these rules. Thus, Aaron of Nicomedia (1300-1369) writes: "The faultless Shehitah requires the division of four parts; viz: the windpipe, the gullet and the two veridim. If either of them is left uncut, the Shehitah is imperfect. The main object of the Shehitah is the draining of the blood, and the blood is drained by the severance of the veridin (Gan Eden, Inyan Shehitah c. x; cf. Eliyah Bashyazi, Aderet, Inyan Shehitah c. II).

(18) According to the Rabbis, the primary inhibition of the use of blood (Gen. IX. 4) aimed to check the barbarous custom of excising pieces of flesh from a living animal for human consumption—a custom which, the Talmudists declare, originated in antediluvian days (cf. sifre to Deut. XII 23; Tosefta Ab. Zarah IX. 4, et al.), and, according to modern travelers, still survives in parts of the Dark Continent. Wiener (Die jued. Speisegesetze, p. 207) cites "a famous African traveler, G. Rohlf's," who writes (1874) of Abyssinians: "They cut pieces of flesh from a living animal and consume them in a half raw state, and nonchalant-

ly leave the victim of their cannibalistic appetite to its own fate."—Diodorus Siculus (III. 26) reports of Ethiopian elephant hunters that, after hamstringing and felling the elephant, 'they gathered about it in crowds and, as long as it lived, cut slices from its hindquarters and devoured them' (cf. also Mainmonides, *Moreh* III. 48; Smith, *Religion of the Semites*, p. 342).

(19) "That the vertebral arteries take a far smaller part than the carotids in the nutrition of the brain is shown by the fact that in recent years surgeons have begun to treat epilepsy by the ligation of the vertebrae without in any way interfering with the health and mental activity of the brain. Thus, the surgeon Roman von Baracz, of Lemberg, published a case in which he ligated both the vertebrae of an epileptic subject without any injury to his health (*Wiener Med. Wochenschrift*, 1889, Nos. 7, 8 and 9). This method is not even new, as Dr. Alexander, of Liverpool, had performed this operation in thirty-five cases as long ago as 1882. The vertebral arteries can evidently be of no great importance for the blood-supply of the brain" (Dembo, *The Jewish Method of Slaughter*, p. 17).

(20) "When the arteries of the neck are divided in such manner as in the Jewish method of slaughter, so enormous a quantity of blood escapes from the four gaping mouths of the vessels during the first seconds and the blood-pressure in the brain falls so rapidly that consciousness is at once irremediably lost. In hundreds of cases I observed in slaughter-houses and in all controlling experiments in the laboratory, I invariably found that unconsciousness came on after three to five seconds, and with it, as a matter of course, sensibility was abolished; for the moment consciousness is lost the animal is naturally unable to feel anything" (Dembo, op. cit. p. 8).—The Talmud describes the animal's state between the performance of the *Shehitah* and death as 'having quit the community of the living and not yet joined that of the dead' (Hullin 121b).

(21) Thus, Mainmonides (1135-1204) considers the institution of the *Shehitah* from the humanitarian view-point. He writes: "*Shehitah* is a necessity, because man's natural food consists of vegetables and of the flesh of animals, the most wholesome of which being those which we are permitted to eat (cf. *Lev. XI*; *Deut. XIV*). No physician doubts this. And because the need of wholesome food necessitates the slaughter of animals, the Law ordains the easiest of deaths, and forbids torturing by cruel methods of execution, as by stabbing, and the excising of pieces of flesh from a living animal, as has been explained.—So also the Law forbids the killing of a cow or a ewe and her young in one day (*Lev. XXII. 28*), in order to preclude the possibility of the slaughtering of the young in presence of its mother; for the anguish of animals under such circumstances is very great. In matters of this kind there is no difference between the anguish of a human being and that of the lower animal, for maternal love and affection towards her offspring are not effects of reason, but of instinct which exists in the animal as well as in the human kind" (*Moreh* III. 48; cf. *ib.* 26). Indeed, the duty of sparing the animal all unnecessary pain is, according to the Rabbis, a Biblical precept (*Shabbat* 128b; *B. M.* 32b), and around it they elaborated a considerable number of regulations, among which is one forbidding the owner to eat before feeding his animals, or to buy animals before laying in a stack of provender for them (*Berakot*

40a; cf. *Gittin* 62a; *Yer. Yeb.* XV. 14d).—And that the *Shehitah* itself is the most humane method of despatching an animal is admitted by all unprejudiced physiologists who judge, not by custom, but by results of investigation and experimentation. Thus, Prof. Dr. W. Preyer, of Berlin, in his letter of approbation of Dr. Dembo's aforementioned work writes: "I am too little acquainted with the history of the Jews and with the Jewish Ritual Law to understand why they have for centuries adhered to the latter with astonishing pertinacity; but that this consistency is well justified from the standard of physiology, that it much better answers the humane purpose of the protection of animals than the uncertain methods of the Christian butchers, and that it is better calculated to further the wellbeing of the nations than the other—this you have proved and established."

(22) The Greeks and the Romans were, in this instance, almost equally deficient. *Neuron* and *nervus* connote a sinew or a tendon as well as a nerve.

(23) When this writer communicated to Dr. Way his opinion of the ancient Rabbis' scientific attainments as inferred from their ritual enactments, the Doctor replied, "Of times we see people doing things, and properly too, with very vague or even no knowledge of Why or Wherefore: and I am still inclined to think more than likely; the ancient Rabbis did this very thing. However... I wish I had at hand the various and sundry citations intending to prove that there existed in ancient Jewish literature evidences of a knowledge of arterial circulation, etc."—thus laying on this writer the onus probandi. And the Doctor is not alone in his belief. Even sympathetic students of Rabbis do not often rise above the apologetical when they come to speak of the knowledge of medicine or anatomy among the Talmudists. They feel obliged to extenuate the Rabbis' presumed lack of knowledge by pointing to the general state of the sciences a thousand and more years ago. Even so clever a Talmudical scholar and author of many clever books on Talmudic subjects as I. M. Rabinowitz, M. D. (1818-1893), speaking of the *Shehitah*, writes: "Not only must the Talmudists not be blamed because in their days the medical science was less advanced than in our days, but we must admit that the Talmudists did not err in practice, etc." (*Einkl. in die Gesetzgebung und die Medizin des Talmud*; Trier 1881, p. 238).—Evidently neither of them believes that *arta exteriora* indicant *interiora secreta*. This writer, however, professes to believe that the Talmudists' practice was founded on reason: it was the consequence of scientific investigation and conviction (cf. notes 14, 15), as he hopes to prove.

(24) *Hullin* 18b et seq.; *ib.* 45a.

(25) This "major part" must be, not of the circumference, but of the inner lining and "perceptible to the eye" (*Hullin* 29a).

(26) *Hullin* 9a.—This inspection is made the easier by the provision 'requiring the *Shehitah* to make an open cut' (*ib.* 30a).

(27) Cf. *Rashba*, *Torat ha-Bayit ha-Aruk* I. 1, p. 5b; *Glossaries in Yoreh Deah* XI., 1 XXV. 1.

(28) *Shehitah* by the mentally defective is invalid, unless a sound person witnesses the whole operation and sees it well done (*Hullin* I. 1); and even then such *Shehitah* is sanctioned *ex post facto* only, not by direct authorization (*ib.* 12b; cf. *ib.* 86a). The *Shehitah* by a blind person is similarly re-

stricted (ib. 13b; cf. Yoreh Deah I. 9 and glossaries).

(29) Hullin 13b.

(30) This is one of the hygienic rules preserved in the name of Mar Samuel, in whose days the blood was considered "chief cause of all diseases" (Baba Batra 58b). It was prescribed for persons of the age of vigorous manhood. As they advanced in age, longer intervals were allowed to pass between operations (Shabbat 129b). And that this rule was the vogue of the third century appears from the facetious interpretation, by a younger contemporary of Mar Samuel, of the description, "Children in whom was no blemish" (Dan. I. 4), as meaning: "Such as have not even a puncture of a lancet" (Sanhedrin 93b). At the conclusion of the operation, on the principle of *Similia similibus curantur* (cf. Berakot 44b; Sanhedrin 41a), red wine was administered as a restorative (Shabbat 129a), and a certain Abba Omana (surgeon) is reported to have taken care that no needy scholar should lack the means thus to regale himself on such occasions (Ta'anit 21b).

(31) Even in trifling civil cases the Rabbis were not wont to give unpremeditated opinions. Their guiding maxim was: "If the matter is as clear to thee as the morning say it, and if not say not" (Sanhedrin 7b).

(32) Yebamot 120b; Gittin 70b.

(33) Cf. the writer's "Criminal Jurisprudence of the Ancient Hebrews," Baltimore 1891, §§ 23, 35, 134, 135, and sources cited in the notes.

(34) Yebamot 120b; Gittin 70b.

(35) Hullin 33a, 121b; Maimonides, *Ma'akalat Asurot* VI. 12. Were he to eat it before the animal's death, he would be guilty of transgressing the Biblical prohibition, "Ye shall not eat upon the blood" (Lev. xix 26), which the Rabbis interpret as meaning, 'Before all life is gone' (Sifra to Lev. I. c.; Sanhedrin 63a).

(36) Cf. supra note 21.

(37) Cf. supra note 20.

(38) Ancient medical authorities, like Aretaeus, were opposed to the operation of bronchotomy, arguing "that the wound would endanger an inflammation, cough and strangling; and that if the danger of being choked could be avoided by this method, yet the parts would not heal, being cartilaginous (Smith, Greek and Roman Antiquities, s. c. Chirurgia). Among the Rabbis no such fears were entertained. In the course of a discussion on the danger lines of tracheal and esophageal rents and splits (cf. Hullin III. 1 and 2, p. 45a et seq.), a case is cited where the perforation of a lamb's throat was cured by the insertion of a reed tube (ib. 57b).

(39) For the better understanding of R. Judah's proviso, the paragraph of the Mishnah wherein the proviso is incorporated follows. The anonymous Mishnah declares: "Where one severs one organ of a fowl or both organs of a quadruped, his Shehitah is ritually right. The major part of an organ is considered as its whole (cf. Note 21). R. Judah declares, provided he severs the Veridin" (Hullin II. 1). This is the literal signification of the Mishnah. In the discussion that follows it, the Rabbis construe the part referring to the slaughter of fowl as applicable ex post facto only; i. e. the broad purport of the law requires that, whether of fowl or of quadruped, both organs shall be severed; but if after the fact it is found that in a fowl only one organ is cut, the Shehitah is sanctioned (Hullin 27a). So also the sanction of the incomplete division of an organ is re-

stricted to ex post facto cases (ib.). Some Rabbis would apply also R. Judah's proviso to fowl only (ib. 28a); but another version of that proviso unmistakably includes quadrupeds. There it reads thus: "Where one cuts two halves (i. e. half of each of the two organs) of a fowl his operation is faulty; and there is no need to declare the same regarding cattle. R. Judah declares all cases imperfect, unless he cuts the esophagus and the Veridin" (Tosefta Hullin II. 1).

(40) Sanhedrin 96a; cf. Berakot 8b.

(41) Hullin 27a, s. v. Veridin.

(42) M. Jastrow, Dictionary of the Targumim, the Talmudim, etc., s. v. Varid. While his etymology is ingenious, it may just as well be applied to other blood vessels, "leading from the head to the heart"; the definition is therefore not conclusive. Joseph Malinowsky Troky (Karaites, sixteenth century) derives our term from *Verad* (a rose), and thinks that these vessels are so called "because they are full of blood and red as blood" (Kizzur Inyan Shehitah c. 2). Isalah Berlin gives a similar explanation (Tosefto Rishon le-Zion ad Hullin II. 1).

(43) Cf. Note 39.

(44) Hullin 28a.

(45) Cf. Notes 20, 21; Aaron Halevi, *Ha-Hinukh* § 451.

(46) Hullin 28b; cf. Note 19; Reggio, *Behinat ha-Kabbalah*, p. 196 et seq. That such knowledge was common among the Talmudists, or that even every Rabbi whose name the Talmud mentions in connection with Shehitah regulations was a physiologist—such an idea is not intended to be conveyed. Indeed, from the discussions on R. Judah's proviso (Hullin I. c.) it clearly appears that the humane reason of the proviso was not communicated even to all students of the Shehitah regulations (cf. Note 12). Thus, when one of these approached R. Judah with the naive question, "Since the Veridin were never mentioned except in connection with the draining of blood through them, what difference would it make whether they were cut simultaneously with the organs or later?" he was not enlightened. R. Judah simply replied with the argumentum ad ignorantiam, "At the moment the Shehitah is performed blood flows freely, being warm; later blood will not flow, because it gets chilled" (Hullin 28b). The ground of the question is important historically. It shows that the knowledge of the true function of the Veridin as blood carriers was not born even with R. Judah himself. The questioner had heard of the blood-carrying capacity of the Veridin from others, before R. Judah introduced his proviso.

(47) The reason for prohibiting the division of the animal's neck (Hullin 27a; cf. Tosefta Hullin II. 3; Rashba, *Torat ha-Bayit ha-Aruk* II. 1, p. 23b et seq.) is, 'Because the Law prescribes a single Shehitah, and not a double one' (cf. S. Bear, *Zibhe Zedek*, p. 1 and sources), which would apparently be the case were the severance of the frontal parts immediately followed by the severance of the dorsals. The physiologist sees in this prohibition a deeper scientific reason: cutting into the dorsal parts would check the flow of blood. For the vaso-motor centres which regulate the dilatation and contraction of the blood vessels, lie chiefly in the cervical portion of the spinal cord and keep the blood vessels in a state of tension through which the blood is expelled from them after the section of the carotids; an injury to the spinal cord results in immediate paralysis of these centres, and in consequence the blood accumulates in the swollen veins and there re-

mains (cf. Dembo, op. cit., pp. 39, 41, 85). This too the Talmudists knew, as may be gathered from their teachings. They explicitly state, "He that breaks the neck of the (ritually slaughtered) animal before life has become extinct, causes retention of blood, increases the weight of the meat and defrauds the people" (Hullin 113a), charging for the retained blood as for its weight in meat (Rashi ad 1. c.). Besides, the ante mortem convulsive movements which evince health and vigor in the animal (Hullin 38a) would be absent, owing to the paralysis resulting from the injury to the spinal cord, and this would render the meat of doubtful fitness for food. Israel ha-Maarabi (Karaite, XIV century) expresses the adoption by his school of these Rabbinic rules when he says, "The Shohet must take care not to let the knife touch the spine, or cut into the marrow, or cut off the head with one blow. If he does either, the Shehitah is faulty and the animal is taboo, for it will expire at once, without moving or struggling with its legs, and the blood will not be expelled" (Hilkot Shehitah VII).

(48) Hullin 93a.

(49) R. Nissim ad Hullin 1. c. What particular vessels "the two" are I do not know; nor do I know why, or that, the two do not empty through the Veridin as, according to R. Nissim's own statement, all other blood vessels do. Is it because their connection was severed by the section of the Veridin themselves and of the ganglia? Be this as it may, the Rabbi's declaration that 'only the vessels of the foreleg and of the jaw do not empty through the Veridin,' by no means weakens the inference from his first declaration regarding the other blood vessels, that the division of the Veridin makes them ritually bloodless.

(50) R. Nissim, in this particular instance, does not refer to his predecessor, although he otherwise mentions him quite often—thrice on the very page containing the above elucidation. It must therefore be deemed that he reasoned it out himself, unaware of having been anticipated.

(51) Torat ha-Bayit ha-Aruk II. 3, p. 68b. In a previous chapter of the same Bayit (II. 2, p. 29a), Ben Adret writes: "When the incision is made in the cervical parts, the blood of the body starts to escape through the gash; but when (immediately afterwards) the back of the neck is broken, the blood regurgitates and becomes absorbed in the body (cf. Note 47) and is therefore considered as blood dislocated from one place and lodged in another place (cf. Note 13) which is forbidden (Cf. Rashi to Hullin 113a; Asheri in Hullin I § 3).

The Child-Carrying Woman.*

By Henry F. Long, M. D., Statesville, N. C.

It is the purpose and intent of this paper to turn attention to the child-carrying woman during the period of gestation. Volume upon volume and book after book have been written and innumerable papers read concerning the pregnant woman, in which very little space is given to pre-labor conditions, while the mechanism of labor and anomalies and the after care of mother and child are considered at great length. Apparently no importance

is attached to, or consideration given, the period of gestation—the period of utmost and highest importance—the period of prevention. The reason or excuse for this is that ancient and hoary-headed monster called custom. Formerly and all too frequently even now in this age of enlightenment and knowledge, it was the exception when the obstetrician saw or even heard of his prospective patient until after she had actually gone into labor. This custom, born of ignorance and indifference, fruitful of disaster, disease and death, should not be allowed to longer pursue its course unhampered and unrestricted, gathering its toll of the laboring mother and her unborn child. This day of preventive medicine finds its highest field of endeavor, its source of greatest reward for work well done, in the management of the child-carrying woman from the time of the fecundation of the ovum until the end of puerperium. There is not half so much race suicide as there is race slaughter in the mismanagement of the child-carrying woman, due to indifference, ignorance or negligence, on the part of the doctor or the prospective mother, or both.

As soon as pregnancy is diagnosed, and usually this is about the beginning of the third month, the hygienic and dietetic care of the woman should begin. And pregnancy, normal thought it be, has all the clinical characteristics of a definite disease, with a definite etiology and symptomatology, organic and functional disturbances and a mortality of about 1 per cent.

When the patient first consults the doctor she should be given a thorough physical examination of the heart, lungs and pelvis, including pelvic measurements. By doing this, grave complications can be avoided in cases where the woman is physically unfit to bear the ordeal of child-birth or where the pelvis is deformed or too small to permit the birth of a child without surgical intervention.

Pregnancy requires increased activity of all the organs of the body, both secretory and excretory, particularly those concerned in metabolism. The pelvic organs, the thyroid, heart, kidneys and liver are the principal organs of which increased activity is demanded.

Diet.

The ordinary case of "morning sickness" requires no special diet but so-called morning sickness may be the first stage of a true hyperemesis or an indication of (1) Uterine incarceration or other serious local abnormality requiring

*Read before the Ninth District Medical Society, April 6, 1915.

mechanical or surgical interference. (?) May indicate serious metabolic disturbance of thyroid, liver, kidneys, septic involvement of dead fetus, on account of alimentary autointoxication, on account of purely local functional or organic digestive disturbance, to which pregnancy is at most a predisposing factor. Therefore, in the treatment of morning sickness (or genuine hyperemesis) according to superficial symptoms without genuine diagnosis, the use of one drug after another, following the empirical doctrine, is worse than foolish—it is criminal.

Throughout pregnancy the diet should be simple but varied. Take care to exclude the beverages tea, coffee, and alcohol in any form; large amount of meat; canned goods; sea foods a long distance inland; stale eggs in which decomposition may have begun; and such organs of cattle, hogs or sheep as liver, thymus; butter, fresh eggs, small amount of fresh meat, poultry, fish, vegetables, and potatoes; the vegetables should be those which furnish the maximum amount of nourishment with the minimum of residue; soft fruits free from seeds. Above all things it is of the utmost importance that a sufficient quantity of water be drunk, for upon this depends every function of the body.

The tendency of the average woman to overfeed and under-exercise must be strictly guarded against, for under such conditions the child receives more nutrition than necessary, the sutures of the head, instead of standing open and ready to lap and mold as they should, are united, making delivery of the head almost an impossibility. We have no such trouble as this with the negro or savage woman, who is not overfed, consequently the child is not over-nourished, the head molds easily and labor is completed without any external aid whatever.

While it is very important to secure daily evacuation of the bowels, peristalsis should be stimulated by the use of medicinal laxatives, enemas of soap and water, or glycerin suppositories, rather than by large amounts of fruit or fodder vegetables. The first procedures being simple in use, certain in effect, while the latter, by reason of bulk put extra work upon the digestive organs and delay or impede peristalsis.

General Hygiene

The first and most important consideration is pure air, which is to be obtained by living in the open as much as possible and by properly ventilating the house, especially the sleeping room. Rooms are

to be ventilated by having the windows pulled down from the top, as atmospheric impurities accumulate at the top of the room, not at the floor.

Respiration and consequently fresh air, during the latter months of pregnancy, is impeded by the encroachment of the enlarged uterus, hence pure air becomes more and more necessary. Other factors that too often interfere seriously in this respect are dress and indolence. Articles of dress that may seriously affect the well-being of mother and child are corsets, waist-bands and girdles, garters and high heeled shoes.

Let the clothing keep the body comfortably warm, particularly the lower limbs. Exposure to cold and wet, especially when overheated, may lead to renal congestion and nephritis.

Muscular Exercise

Walking in the open air is the best exercise and if kept within reasonable bounds, can be indulged in to the very day of confinement. It increases respiration, appetite, digestion, peristalsis and sleep. All forms of violent or jolting exercise or lifting must be avoided.

Bathing and Sleep

The skin must be kept clean by warm (not hot or cold) baths, taken at least three times a week. Sleep is all important. The pregnant woman should retire early, occupy a bed by herself and sleep at least eight hours.

Blood Pressure and Urinalysis

In the blood pressure test we have a most valuable means of detecting the early toxemias, and one that early furnishes definite indications of metabolic changes, and usually before the development of physical signs or noticeable change in the urine. Alterations in metabolism and overproduction of waste products and the development of special toxins in the blood will show themselves in a gradually rising blood pressure. Blood pressure observations should be made a part of the periodical examination of pregnant women, becoming more frequent towards the end of gestation and continued during the puerperium, as in this period serious toxemic or eclamptic attacks may develop. The blood pressure will furnish a far more reliable guide to the seriousness of a pregnancy nephritis than will the usual urinalysis.

Dr. John C. Hirst places the average systolic pressure, at rest, in the non-pregnant woman showing no signs of heart or kidney lesions, at 112 mm. of Hg. In pregnant women showing no sign of kidney disturbance, or other signs of tox-

emia, an average of 118. This remains practically unaltered up to $7\frac{1}{2}$ months, then begins a gradual rise so that, in the last month of pregnancy, the average normal pressure is 124. This pressure falls with the subsidence of the uterus. A pressure of 30 mm. above the average, or pressure above 148 is not normal and indicates toxemia. Should this occur after the onset of labor, which is usual, there should be a fall in pressure with the rupture of the membranes and a second fall of from 60 to 70 mm. immediately after the child is born, with a quick return to the same level before labor set in. The fall with the rupture of the membranes is usually accompanied by a marked relief from headache and gastric symptoms. Profuse hemorrhage or exhaustion will interfere with after birth rise, and this failure to return to pre-labor reading indicates the seriousness of these complications. A high and constantly rising blood pressure in the latter half of pregnancy is the earliest and most constant sign of toxemia and precedes albuminuria and the constitutional symptoms of an attack of eclampsia. If abnormally high blood pressure persists in the third stage of labor, or there is little or none of the usual decline following the delivery of the child, measures for relief must be instituted as urgently as though its seizures were present. On the other hand, a very low pressure, which does not follow the normal curve during labor, but remains abnormal, also indicates a very serious condition, in which, as in the abnormally high pressure, the disease usually progresses to a rapidly fatal termination.

In other conditions we have low pressure, to-wit, toxemia in the first half of pregnancy, associated with pernicious vomiting, due probably to the fact that these toxic substances have a marked influence on the vomiting center, with but little effect on the vasomotor system.

The blood pressure seems to bear definite relation to the type of case, and frequent observations will be of great value in prognosis and treatment.

To summarize: A pressure below 125 could be disregarded; from 125 to 150 needs careful watching; Over 150 needs active eliminative treatment, and may require induction of premature labor, especially if it shows a tendency to rise rapidly.

Examination of Urine

From time immemorial urinalysis has been the most valued and valuable procedure in the pre-natal handling of a pregnant woman. It was pre-eminent in

importance before the reading of the blood pressure was given proper interpretation, and now, hand in hand with blood pressure, constitutes sure and certain knowledge of the favorable or unfavorable progress of pregnancy. Along with the blood pressure, urinalysis should be done at short intervals during pregnancy, especially during the last few months. This examination should be thorough, both chemical and microscopic, otherwise this valuable procedure may, in incompetent hands, lead to disastrous consequences.

Care of the Women in Labor

Before taking charge of a labor case the doctor should secure a competent nurse or an assistant, preferable both, and be prepared to do any surgical operation that may be required during or after the delivery of the child. The surgical procedures that are most frequently found necessary are (1) the use of forceps and (2) the repair of lacerations. An operation which the writer has found useful and especially to be recommended in women who have had perineorrhaphies with a large amount of scar tissue, or in any instance where there is great disproportion between the vaginal outlet and the fetal head, is to make lateral incisions, which allows the perineum and vaginal floor to drop down. This minor operation is called episiotomy. The writer's attention was called to this more than fifteen years ago by Dr. Howard Kelly.

The consent of the expectant mother to having any birth injuries repaired should be obtained, and with this understanding the doctor should, at the time of delivery, have everything in readiness as for a major operation. Most of the instruments can be sterilized, wrapped in double sterile cloths and packed in the obstetrical bag, ready for instant use. In addition a small boiler for sterilizing instruments is a part of properly equipped obstetrical bags.

The after results of unrepaired tears of the perineum are of the greatest importance to the future health and happiness of the mother. Women, because of the dread of an operation often refuse repair of injuries and yet view, with more or less complacency, a life of suffering and general ill health, which invariably follows unrepaired lacerations.

One factor, which has been almost completely ignored by the medical profession, is that marital unhappiness, estrangement and infidelity on the part of the husband could have been avoided by proper care of the wife during and after

labor. The well-meaning but uninformed may take exception to this statement, but nevertheless it stands out above all others, unrecognized, and its cause misunderstood. Every doctor can recall many cases of estrangement after the birth of the first baby, the real cause of which was the unrepaired lacerations and consequent difference in sexual relations.

The more common results of unrepaired birth injuries are.

(1) Tear of the cervix, followed by erosion, this by a persistent leucorrhea and greater probability of carcinoma.

(2) Tears of the perineum with resulting:

(a) Incontinence of feces and gas, making a hermit of the unfortunate one;

(b) Cystocele, producing urinary troubles, such as partial retention, cystitis and frequent micturition;

(c) Rectocele, which tends to cause chronic constipation, hemorrhoids, pelvic congestion, etc.;

(d) Uterine displacement, particularly retroversion and prolapse, accompanied by malposition of the ovaries and tubes;

(e) Various other disorders of a more or less serious nature, such as endometritis, endocervicitis, menstrual disturbances, dysmenorrhea, nervous disturbances of various kinds—all these factors tending to make a confirmed invalid of the women.

Care of The Patient During Delivery

(1) The patient should be given an enema to clear the lower bowel of all fecal material. This will tend to prevent sepsis, for as the head of the child, in its descent, sweeps the perineum, some of this germ-laden material will likely be forced out. This would increase the danger of infection.

(2) During the second stage of labor the head of the child should not be allowed to remain in the vaginal outlet between pains. After the head has descended to the pelvic floor each succeeding pain forces the head further down and the perineum bulges. As the pain passes off the head partially recedes and it is the writer's custom to aid this recession by pushing the head back up into the birth canal until there is no further strain on the perineum and vaginal outlet. This procedure allows the blood to circulate freely in the perineum between pains and thus lessens the danger of tears, for anemic muscle is the more easily torn and the tears usually more extensive.

Forceps

Forceps are for the purpose of rescuing

the head. It is the writer's belief that when the bag of waters has ruptured and the os fully dilated, a skilful forceps delivery will do far less damage than a lingering head. In addition, this lessens the liability of an asphyxiated or still born baby. Carried out in the proper way, under aseptic conditions, this does not increase the danger of sepsis. One of the important advantages of this is that the uterus is not subjected to such terrific strain and involution takes place more rapidly and completely and, too, the woman is not exhausted after delivery but in a few hours "feels herself" again.

After the delivery of the placenta the uterus should be explored. The left hand on the abdomen should grip the fundus utri and the clean, gloved right hand explore the uterus thoroughly, cleaning out any remaining placental tissue or blood clots. The advantages of this are:

(1) By removing all large blood clots and placental tissue the danger of postpartum hemorrhage is lessened and that of sapremia is practically eliminated;

(2) This also tends to prevent septic infection of the uterus, for the empty and tightly contracted uterus presents an almost perfect barrier to the upward extension of infection;

(3) There are no after-pains, there being nothing in the uterus to excite spasmodic contraction of the uterine muscle;

(4) The involution of the uterus is more rapid and the patient can be on her feet earlier. It is our rule to allow the woman to be up as soon as the uterus has undergone involution and cannot be felt above the symphysis pubis. Frequently, by this method, the uterus is below the symphysis in five or six days after delivery.

Repair of Injuries After Delivery.

Should any tears of the perineum occur at the time of delivery, they should be repaired immediately. The torn surfaces are fresh, good opposition can be secured and the results are as good as if done a week later. The parts being more or less insensitive, little or no anesthetic is required.

Without thorough preparation, a nurse or an assistant, and aseptic precautions, a doctor cannot carry out this plan safely and I would not advise it under other circumstances. Delivering a woman is not a minor operation, however, and no one should attempt to care for a parturient woman unless he is properly equipped and prepared to meet any emergencies

that may arise.

"Twilight Sleep"

At present the lay press is indulging in a spirited discussion of Twilight Sleep, a method of painless delivery made famous by Kronig and Gauss at the Freiburg Clinic. These men did not originate this method but simply improved a technique which has been in occasional use for many years.

I advocate Twilight Sleep if given properly. This is possible only in a hospital where there is an abundance of trained help. I have used this method of painless delivery in twelve cases. In no instance have I had any unfavorable results. All the mothers have made rapid recoveries. The babies were all born alive and in none was there any difficulty in establishing respiration.

There have been cases reported of fatality to the mother or the baby when Twilight Sleep was used. These unfavorable results I believe to be due to bad technique in giving the morphin-scopolamin anesthesia.

The Secret Of Giving Twilight Sleep Successfully:

(1) It should be given only to those who have been prepared—the preparation, beginning when pregnancy is first diagnosed, consisting of those measures which have already been discussed at length.

(2) Final preparation for this should begin several days before confinement. The patient should be thoroughly eliminated and the kidneys in good shape before the onset of active labor.

(3) Start the 'Twilight' only when sure the patient is really in labor.

(4) Deliver the child with forceps as soon as the os is fully dilated.

(5) Should there be any tears, they can be repaired without the administration of further anesthetic.

Compensation

The majority of the laity do not realize the importance of skilful care during and after delivery, some being content even with the services of a midwife, on account of the small cost.

Even the doctor, I regret to say, does not properly estimate the value of his services. This custom has made it difficult for the obstetrician to collect his fee, which at present is by far too little for the service that should be rendered.

Conclusions

(1) None but a skilled obstetrician should deliver a parturient woman. Bad obstetrics has created the field for the gynecologist, though only a small

percentage of these ever get to the surgeon at all, but drag along through life, an invalid, because of improper care during labor.

(2) We condemn sitting around a parturient woman for hours waiting for her to deliver herself.

(3) The mortality in child-birth should be practically nil, in uncomplicated cases.

(4) A woman should be in a good shape, physically, after delivery as before.

(5) The compensation is insufficient for this line of work.

Cervical Ribs.*

By Archibald E. Baker, M. D., Clinical Professor of Abdominal Surgery and Gynecology Medical College, State of South Carolina, Surgeon-in-Charge Baker Sanatorium Charleston, S. C.

Cervical ribs are congenital bony deformities. In the lower vertebrates every vertebra has attached to it a rib, and as we ascend the scale to the mammals do we find the ribs restricted to certain portions of the spinal column. Normally, in man, the ribs are restricted to the dorsal segment of the spine, however, occasionally lumbar ribs are found but they are of anatomical, rather than clinical significance since they rarely, if ever, give rise to any discomfort.

Until within the last twenty years the cervical ribs that were recorded were considered anatomical curiosities. The anatomist reporting these early cases assumed that individuals thus affected had shown no symptoms during life. This was probably true in some of the cases, but undoubtedly many had symptoms which to-day would be diagnosed correctly, and the condition relieved.

Perhaps the oldest description of cervical ribs was published by Hunwold in 1742. A comprehensive description and classification was written by Gruber, in 1849, in which he brought the reported cases up to seventy-six. In 1894 Pilling collected one-hundred and thirty-nine cases and reported them. Only nine of these had been recognized during life. Since the Roentgen Ray has come into use the deformity has been recognized during life more frequently.

In 1907 Keen reported a case and reviewed the literature in his characterist-

*Read before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

cally thorough manner. He stated that he had seen his first case two years previously.

It is interesting to note that the deformity is bilateral in seventy-five per cent. of cases, and as a rule the false rib springs from the seventh cervical vertebra: but cases are reported by Beck, Hanswirth and Williams in which they grew from the sixth cervical.

These false ribs are more or less completely developed in different cases.

Gruber's classification is the one generally adopted on account of its simplicity. He divides cervical ribs into four groups as follows.

(1) Slight projection not beyond transverse process.

(2) Slight projection of the rib into the muscle.

(3) Well developed bony rib reaching down to the first rib.

(4) The rib which is completely developed articulating with the first costal cartilage and with the sternum.

These cervical ribs infringe on the territory of very important structures: the brachial plexus, the subclavian artery and vein, and the pleura. The brachial plexus is generally implicated, and the nerves involved are those coming down in the inner cord. The eight cervical and first dorsal nerves are spoken of as "the nerves of attach in cases of cervical ribs". According to Howell the route of the first dorsal nerve passes almost directly upward on the neck of the first dorsal rib, easily coming in contact with the cervical rib as it curves downward and forward. The variety of pains occurring in the neck, shoulder and arm in different cases can all be explained by this irritation of the brachial plexus. The phrenic nerve, because of its course in the scalenus anticus muscle, is in close association with the cervical ribs. Hunt reports a case of spasm of the diaphragm which was relieved by the removal of a cervical rib.

The association of the artery to the false rib is of prime importance and produces the vascular symptoms. If the rib be short and of poor development, the artery does not pass over it—but runs in front of it. The artery has never been observed running behind the rib. The scalenus anticus muscle is inserted into the anterior end of the rib and the subclavian artery crosses it posteriorly, and rest between the rib and the muscle. This relation explains the pressure on the vessel. It has been reported that in many cases the pressure on the artery

has been so extreme as to cause gangrene of the finger. In some cases difference in the radial pulses may be detected, also thrombosis varying in extent may arise. The forearm may be involved, and the thrombosis ascend into the auxiliary artery to the subclavian itself—collateral circulation must then supply the limb.

The relation of the pleura to cervical rib is to be considered anatomically but it is seldom encountered surgically. However, in the Mayo Clinic one of the patients operated upon the pleura was opened but with no bad results.

While cervical ribs are congenital deformities, they rarely give symptoms until adolescence and well into adult life. In the reported cases less than ten per cent. give symptoms or are discovered during life. There is no satisfactory explanation of why this is so, but probably they are slow of growth. Keen, suggests that as we grow old the tone of the muscles is lost and the shoulders droop, thus increasing the angulation of the structure passing over the rib.

As regards the relative frequency with which cervical ribs occur, no definite data can be obtained. It is believed by some observers that heredity has a bearing in the history of these cases.

For some reason unexplained cervical ribs are more common in women. In literature on the subject the percentage is usually rated as seventy per cent. of females and thirty per cent. of males. In the Mayo Clinic thirty-one cases reported during the last five years. In this group twenty-two females and nine males. Seven of the patients (five females and two males) were operated upon. Both ribs were not removed in any of the cases. Eighteen of the remaining cases in this group—operation was not advised: the patients giving no symptoms. Cervical ribs in these cases were discovered accidentally in the course of routine examinations.

On reviewing the literature, one is impressed by the wide range in the variety and degree of symptoms. A great many of the cases are diagnosed as brachial neuritis.

In only two of the Mayo's Series had a correct diagnosis been made previously. A persistent neuritis for a number of years is usually the prominent symptom, but the diagnosis can only be clinched by the X-ray.

The symptoms may be considered under two heads: nervous and vascular.

Wide variations are met in different cases. Under the head of nervous symptoms may be found neuralgic pains moving down the arms, also numbness and tingling due to pressure on the roots of the brachial plexus, at times amounting to a true neuritis, even to the degree of loss of motor power. The cervical sympathetic may show pressure symptoms, also the recurrent laryngeal, producing flushing, ocular disturbance, hoarseness and dysphagia.

Next to the nervous disturbance, the most common symptoms is the interference with the subclavian vessels, which has already been mentioned.

Operative technic—there are practically two methods of attack—the posterior and anterior. The posterior incision is preferable, because the operator can safely avoid injury to the brachial plexus, pleura, etc.

Case Operated Upon.

History—Miss H. Age 34, Weight 90 pounds. Sight, hearing, heart, etc.—good. Pelvic examination negative. She has been in poor health for about fifteen years. For past ten years has suffered with pain in back of neck, gradually getting worse each year, radiating down both arms and into axilla, of sharp shooting character. These pains are constant. Also constant pain over occipital bone. Last year, April, 1913, while in New Orleans, she was operated upon for Goiter (partial removal of Thyroid Gland). Symptoms subsided for about two months, then returned in all their severity. Patient went to Philadelphia for treatment for nervousness by a specialist. All symptoms continued and she returned home. Diagnosis of cervical rib was made by Dr. Jos. Maybank, who referred case to me for operation. X-ray, by Dr. Taft, showed two "false ribs", one on either side.

Operation—Posterior incision was made one inch from median line, extending three fingers above and below the seventh cervical vertebra. Cutting through anterior border of the trapezius. Dissection was made and continued down between the posterior border of the scalenus medius and the levator anguli scapular. The advantage of this incision is that the brachial plexus comes down between the scalenus anticus and medius and is out of danger. By adhering closely to the cervical rib injury to structures is avoided. The aim should be to remove the rib with its periosteum to prevent regeneration. Recurrence of the trouble has been reported from

leaving the periosteum and also from leaving sharp bony prominences instead of removing them. The large nerve trunks must be handled with gentleness when stripped away from the rib. Several cases of temporary paralysis from want of care in this step are reported. If the rib be large the subclavian artery is on top of it; if small, the artery is in front of it. The vein is rarely seen. Always keep the seventh cervical in sight as a landmark. With a bone elevator the false rib was prised up, and with bone forceps the false rib was severed from the transverse process and removed. These ribs (both sides being operated upon) belong to the third class according to Gruber—"well developed bony rib reaching down to the first rib". Some difficulty was experienced because of the position of patient on table for operation. Treissler advises a sitting posture for operation: but in this case the patient was prone on her face, head and shoulders well over the end of the table, rendering the administration of the anaesthetic quite difficult. I was materially aided in this operation through the kindness and assistance of Dr. O'Driscoll, who gave me the privilege of his dissecting room for the purpose of doing this operation on the Cadaver.

Summary.

1. Cervical ribs rarely causing symptoms until in adult life.
2. The deformity is bilateral in seventy-five per cent. of cases and is three times more common in women than men.
3. It is estimated that only ten per cent. of cervical ribs cause symptoms.
4. The size of the cervical rib is not the index to the symptoms.

Note—Since reading this paper before the Medical Society of South Carolina, Dr. A. A. Law has published his paper on "The Surgical aspect of Cervical Ribs," in which he briefly summarizes the symptoms and diagnosis of servical ribs, and discusses, in detail, the operation he has found most useful. Posterior incision, practically the same technic as described above. He reported two cases, one of which he says is unique because it is the only case reported where both cervical ribs were removed. If this is true, then the case reported in this paper removing both ribs makes the second case on record.

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**EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.**

THE OLD DOCTOR.

There was an editorial in the November issue of *Clinical Medicine* that is worth reading; that is, by any man to whom it may apply. The gist of the matter is, that there is little reason for the old doctor to sit down and wail because he feels the competition of younger men.

Each one of us is correctly informed as to his own deficiencies. We are apt to credit the other man with knowing all we know, in addition to what he knows that we don't. More than a few battles have been won because the successful general guessed correctly that the others were a little worse mauled and scared than he was.

The new graduate turned out from the modern medical school is up on the new stuff; he is great on pathology, full of laboratory technic, descants glibly of bacteria, hormones, amboceptors and complements; his therapeutics embraces serums, antitoxins and bacterins, with the Knife looming as a usual resource—not any more a last one—and he listens impatiently if you mention a drug. But he does not know that what ails old Jimmy Jams is that it is the time for his next spree, or that Jennie's incomprehensible symptoms will vanish when her flow commences, or that old Mrs. Brown will cease to be asthmatic when the tetter reappears; or a host of other things that are so familiar to you that you forget they mean or are worth anything.

The simple truth is that the learning of any old, experienced practitioner is invaluable; it cannot be acquired except through the years of observation by which it came to its owner.

Here endeth the first lesson that every man should learn the value of his own acquisitions, his own knowledge, his own resources.

The second is that he should not be content therewith, but should seek to improve. Send your old textbooks to the nearest library, and fit yourself out with a complete set of the newest and best. Don't fail to include the anatomy, and very especially the physiology. Chemistry is a new study to him who has been twenty-five years out of college. Learn it.

Refresh your memory on anatomy, realize the advances in physiology, and you may then tackle the new pathology understandingly.

Follow with therapeutics, practise surgery and obstetrics—four new departments as compared with that you went through a quarter of a century ago.

Make this a post-graduate course for yourself. Get the books, and retire for two months to your lodge in the wilderness, your fishing camp, and make a daily stunt of 100 pages of the new books. Don't try to memorize, or to learn uselessly the names of men who have given their own to new diseases. Leave that to the youth who is to face one of the Examining Boards, who in the exercise of what wisdom the Lord has endowed them with, and it doesn't seem to be much, mark a candidate on such trifles. Go over the pages, skip what you know very well, and pick out what you can utilize. You'll find plenty.

Two months thus spent should see the most of the contents of the books transferred to your own brain, and you will have the volumes themselves for reference. This will cost you about \$50, as against the fees of a college, and the cost of living while in attendance. Really, the only reasons for attending the schools are the chance to see the Professors operate, and the laboratory work, if you intend to do this for yourself thereafter. Better not, if you have anybody who can do it for you. The clinician's duties are in the sickroom; he should leave laboratory examinations to those paying special attention to such matters.

We wonder how many of the doctor's perplexing problems would be elucidated, how many snails untangled were he to take this course. Add the lore derived from texts to that retained from years of experience in practise, and how could the new comer hold his own, even with his youth and modern training?

To the old doctor who complains of waning practise, shrinking income, too strenuous competition, being crowded to the wall, we would say—get busy. Get out of your rut; loosen your purse strings; take time to post up; work your gray matter; and until you have done this, quit whining. If you are not willing to stir yourself this much, then for goodness' sake shut up; and move out of the way of the men who are ready to take the pains to fit themselves for the duties developing upon the physician of to-day.

This is the substance and the spirit of the editorial to which we refer. How

much of it is true and just, how much really fits the conditions presenting in actual life, each reader may say for himself. Truly, there is no time just now for any man to sit down and say he has finished his studies, unless he is willing at the same time to acknowledge that he has completed his life work. No man may for a moment stop in his career without immediately being bumped by the man just behind him. Very little of the newer medical lore is beyond the reach of any doctor who has brains enough to warrant his being a doctor. It is only a question of being willing to take the pains to acquire it.

Now let us give the Young Doctor a wheeze:

Possibly you haven't much money left, and the income from practise is yet to come; but we are advising you to make a momentous investment: Take your text-books on therapeutics, practise, surgery and obstetrics, and on any of the clinical specialties you may have, and ask the bookbinder to rebind them for you, with one blank leaf between each two printed ones; and a dozen blanks following each department. Have the blanks ruled closely. Then, using the fine, small, legible script you acquired by taking notes, put down every fact that comes to you from practical observation and reading, that adds to, takes from, or modifies the statements made by your authors on the corresponding pages. It may be a detailed statement, or a mere note—a word, such as "True", or "N. G." or an apt case-record.

Gradually your books become the digests of your lifework, the sum of your experiences. Some time you may have a troublesome case, and you remember having had such a one before; but you cannot recollect the exact details; here you have them, what was the difficulty, what helped you out, etc.

The value of such a digest would in time become beyond computation. Give us a hundred such and we would turn out a system of Practice that would far outvalue that of Osler or of any single writer. Reflect that the authors of text-books never really see the quarter of the maladies they describe. They make up their chapters from the writings of others, and some of these never saw all the maladies. Errors are propagated and transmitted endlessly. For centuries the legend of the superiority of second-year's digitalis leaves was repeated by every writer, until somebody had the curiosity to test it, and found it an

error. The smartest man who ever wrote a book did not know as much about his topics as did a hundred real practitioners, who treated and studied the diseases, when their knowledge was combined. We can never forget the old gulf coast doctor, who read carefully Osler's writings on malaria, laid down the book, and remarked: "He sure is a fine writer, but he doesn't know anything about malaria." This man had lived with malaria and treated it for forty years. What real experience with it did the distinguished Baronet ever have?

MUSHROOMS OR TOADSTOOLS.

The unpardonable sin must be Ignorance. For ignorance is unpardonable and we have no authority for believing that there are two such transgressions.

The Indianapolis Medical Journal for October tells of four men who were poisoned, three fatally, by eating mushrooms freshly gathered the day they were eaten. Yet these mushrooms were phalloid amanitas, and every book and pamphlet treating of mushrooms tells, and many illustrate, their well-defined characteristics. The United States Agricultural Department publishes a pamphlet telling of mushrooms, edible and poisonous, and sends it free to any applicant. Many excellent works have been published describing these fungi. The Bobbs-Merrill Publishing Company of Indianapolis has in its second edition a work by Jacob P. Dunn, that has plates and descriptions of 1000 American mushrooms, out of the 6000 already classified. This work costs only four dollars, which is very little for so profusely illustrated a volume.

Of the enormous number of native fungi only three are decidedly poisonous, one is unwholesome, and two others are occasionally asserted to be bad, although many persons eat them with impunity. All the poisonous ones belong to the amanitas and are easily distinguished from others. The amanitas have the stem springing out of an enlargement like a bulb or onion, in the ground; and this has scaly sheath, also like the onion. On the stem near the cap is a loose collar, which before the cap expands is adherent to it. These are the chief characteristics, and one should reject any mushroom presenting them. The collar may be rubbed off, or the bulb left in the ground by careless pickers. The sheath may be indistinctly marked, and in the fly amanita is represented by several rows of projecting points on the bulb. This

has also a number of corky warts over the upper surface of the cap. The more dangerous phalloid amanita is usually white, with graceful, slender stem; it looks good, is not eaten by insects, and when the cap is placed on a sheet of colored paper after some hours it deposits white powdery spores.

There are several secondary features, such as the hollow stem, but these are untrustworthy, and it is better to remember the three given, and to reject every specimen showing these.

The phalloid amanita contains two poisons, phallin and muscarine. The former is a hemolysin, dissolving the red-blood corpuscles and thus inducing dyspnea from lack of oxygen, as its main clinical feature. There is no known antidote, although arsenic is believed to be an antihemolysin to some extent.

Muscarine acts much like pilocarpine, and paralyzes the great veins of the abdomen, allowing the blood to collect there until the cerebral vessels are empty and syncope occurs. It is so evanescent in its action that it has proved almost impossible to utilize it as a medicine, and, to keep it in the body long enough to get a therapeutic effect. Muscarine is antagonized by atropine, which is more powerful; so that it is impossible for muscarine to kill if enough atropine is taken; but the converse would not be true—one might take a fatal dose of atropine despite all the muscarine he could be given.

The effects of the two combined are closely similar to those of snake venoms. In the fatal Indiana cases the symptoms commenced six to eight hours after the meal, with colic, then nausea, vomiting, increasing in violence, depression, partial collapse, somnolence and death. Death occurred in 36, 38 and 60 hours; the man who recovered did so quite gradually. Unfortunately the description is not at all clear, and we are unable to say whether the fly or the phalloid poison predominated. But a search of the wood from which the plants had been gathered revealed the presence of an unusual number of the phalloid variety.

It is claimed that cooking destroys phallin, and that the acid gastric juice digests it; but I should not care to trust either. Still, the danger is lessened by cooking, and one should never eat any mushroom raw.

The symptoms follow those of snake venoms so closely that the same remedies are applicable. Strychnine has proved most effective against the splanchnic

paralysis, and should be given in increasing doses until evidences of toxic effect are manifest, in twitching of the muscles. This effect must be maintained as long as the continued action of the poison is evident. Forget your book-doses, and give to effect.

Add atropine to counteract the muscarine. Death usually ensues from the combined effects of both poisons; subtract either and if life can be prolonged the toxins will be thrown off. Since hemolysis is the great peril, transfusion of blood is indicated, as well as oxygen inhalations. Nucleinic acid also stimulates the hemopoietic apparatus, and might prove of value.

Besides the amanitas the list of 'toad-stools' includes one out of the 200 varieties of American boleti, the boletus luridus. These have a cap perforated on the under side with pinholes, instead of the ordinary gills. It is bitter and had been pronounced unwholesome though not poisonous. The russula has its enemies, who term it russula emetica, and many friends who eat it with impunity. Lepiota Morgani disagrees with some few eaters, but not with the great majority. Just so, some people cannot eat tomatoes, or strawberries.

We suspect that most cases where ordinary mushrooms have disagreed were those in which the partaker did not see that the caps were free from worms, or they had been gathered when too old and decomposed, or were suffered to lie before cooking until spoiled. A rotten potato would not prove very salubrious to the eater; and mushrooms are apt to spoil very quickly. The little coprini and hypholomas come up in the morning, are dead ripe by noon, and unfit for eating before nightfall.

One of the chief perils is the false lore extant concerning mushrooms—the silver spoon and the white onion lies. The only safe way to avail one-self of these delicious plants is to have a book, and identify every variety before allowing it to go to the kitchen. It is as easy to identify the amanitas as to tell a wild carrot from a cultivated one.

In every wood and field kind nature has spread for us a table filled with the most delicious of foods, but for want of knowledge to detect three poisonous and three possibly unwholesome varieties, we deny ourselves the utilization of the 5994 perfectly wholesome sorts.

THE INTESTINAL FLORA AND FAUNA.

It seems to be characteristic of us Americans to take every possible wrong path before we blunder into the right one. Take pellagra—we have tried to saddle the responsibility for it upon maize, spoiled or good, on the gnat, the stable fly, cottonseed oil, and many other etiologic possibilities. Gradually but surely the opinion of the profession is coming to the alimentary canal and its parasitic inhabitants as the true source of the malady. We may be premature in this statement, but take it as an expression of our personal opinion, and as a prediction. Should it turn out to be a mistake—well, we will not be the first or yet the last prophet to make one; and you and we will all have learned something we knew not previously.

No discovery of modern medicine, not all the well-devised operations of the Surgeon, nor yet Salvarsan, nor the mosquito-transmission of disease, has been of such direct and important consequence to the south as the discovery of hookworm and its transmission through feces-infected soil by the feet, through 'ground itch'. We are now able readily to recognize this malady by examining the stools, and to cure it by the administration of intestinal antiseptics, of which thymol is here the favorite. Moreover we may eradicate the infection by inducing the people to put in toilets on every farm and other dwelling not now provided with them.

Such systems as that devised by Dr. Lumsden, of the U. S. Public Health Service, is especially commendable, as it is cheap, easy to understand and to operate, and effective in its protection of the soil and the wells. Besides, if the farmer insists on utilizing the family sewage as fertilizing material, this system enables him to do so without danger to his family or the customers who consume his farm produce. All one must purchase is a twenty-inch drum of galvanized iron, a T-pipe with the three shafts each eight inches long, two ends protected by wire netting, and two empty barrels. Add to this a cup of kerosene once a week, and we have a model toilet for any isolated residence.

Third, we have learned that amoebic dysentery is readily cured by the use of emetine, the principal alkaloid of ipecacuanha; and that the germs of this malady may lurk for many years in the intestinal canals of those who have

ostensibly recovered from acute attacks of the disease.

Fourth, we have learned that in like manner those who have recovered from typhoid fevers may for undefined periods carry the infective bacilli in their bowels, and impart the infection to those with whom they may sojourn.

Two lessens we draw from these four important discoveries:—

Every practising physician should have at his command the privileges of a properly equipped modern clinical laboratory, where feces may be examined, and the presence of parasitic inhabitants of the bowels detected. Many of our puzzles and of our failures should be turned into brilliant successes by these examinations. The time has come when no diagnosis of any disease that seems in any degree obscure is to be considered complete until this examination has been made. If the doctor has not the time and the apparatus to make it himself he should, and this is preferable, make connections with a laboratory where the work can be properly done for his patients. Certainly, it costs something; but then the public is getting to comprehend that nothing costs like sickness, and that nobody can afford to be sick nowadays, with all the multifarious duties of the day pressing upon us. Looking backward, we recall the time a man came to us with an amoebic colon infection, as detected by the stool examination. He had been trying to get a cure for ten years; and yet a month sufficed when the malady had been really diagnosed. Which could this man better afford—the ten years' un-availing treatment, and disability, and suffering, or the price of a laboratory diagnosis?

The other deduction we make is that we must have an effective system of gastrointestinal disinfection. If the present agents for this purpose are good enough, we should know it beyond a peradventure. If they are not as effective as they should be, we must develop those that will fill the needs.

Twenty-odd years ago hydnaphthol was strongly advocated, and later betanaphthol. Then the sulphocarbolates, since renamed as phenolsulphonates. Aulde followed with copper arsenite. Various forms of arsenic, mainly the organic forms, have approved themselves as remedies against animal parasites in the blood, but how about the bowels? Thymol has been the chosen remedy against hook worm; but a safer one would be preferable for a malady so

widely distributed, and whose treatment comes often into the hands of persons not specially skilled in handling such dangerous agents.

Berkeley urged tar-water ages before the derivatives of tars had been extracted. Illingsworth advocated mercury bini-odide; chlorine water has its friends; the hyposulphites, benzoates, salicylates, the acids, boric, benzoic, salicylic, iodine and its combinations. Old George B. Wood's oil of turpentine for late typhoid fever was antiseptic, although he did not know it. The volatile oils have been landed, especially eucalyptol, although trials demonstrated in oil of cassia superiority over all others.

Bouchard asserted that soluble antiseptics would prove useless in the bowels, because they might be absorbed before making the whole of the buccal, mouth-to-anus trip. This has not been demonstrated; and it is difficult to see how any chemic agent can be active unless it is in a state of solution and besides, those who have tried the soluble agents declare they have done the work effectually.

The matter is too important to be left unsettled. It can only be settled by a collective investigation by many independent persons—and these must be independent physicians. It must not be left to the manufacturers of any of the agents tested. Once a speaker in a great meeting declared in favor of a certain line of drugs, remarking that syndicate of Germans with many millions of dollars was back of the goods. Good old Culberston, of Cincinnati, at once protested against that being allowed as a recommendation to the goods these parties were trying to have indorsed by the medical profession.

We must have effective intestinal antiseptics; but they must be such as we approve in our practice, not merely the goods some firm wants to sell to us.

BREATHING.

Persons of sedentary employment within doors use their lungs but little. They carry but little air into the chest, and even that is not pure. They are laying the foundation for diseased lungs. The exercise of deep breathing is the best preventive of consumption. The capacity of the lungs should be increased to the limit. Exercising the chest by prolonged expansion in the cool air of the morning will bring strength, health, and beauty. That so many are so employed that they neglect chest expansion, and

work in doors, is the cause of so much pulmonary disease.

BOASTING.

"Let him boast that putteth his armor off, rather than he who putteth it on!" One of the most disgusting habits a physician can be guilty of is boasting of his wonderful skill (?) and of the frightfully hard cases he has mastered. It may fool the laity part of the time, but not all the time. A boaster must deliver the goods. And a boaster never does. A physician's good works follow him, and make him a good reputation. A vain boaster will have a short career. He can't blow himself into profitable business as intelligent people will place the proper estimate on him. He is not the victim of over-confidence, but is the possessor of an overplus of gaul. Brass is bad enough but gaul worse. Brass may dazzle but gaul will disgust.

Editorial News Items.

The North Carolina State Medical Society will hold its sixty-second annual meeting at Greensboro, June 15-16-17. We understand that very elaborate preparations are being made in that beautiful and interesting city to entertain the visiting physicians while there.

As usual, the State Health Officers' Association will hold its meeting on the day preceding the regular meeting of the society which will be on Monday the 14th.

From all indications and according to the reports of the various committees now at work, the meeting will doubtless be a record breaker in point of interest, attendance, and quality of the program. Many new features of interest to physicians and health officers will be provided.

The preliminary program has not yet been completed but is expected to be mailed to the members of the society within a week or so. Just before the meeting the permanent program will be issued. From the lay press we get the information that several papers will be presented that will be of especial value. Among them might be mentioned the following: "The Whiskey Law and the Duty of the Profession," Dr. J. Howell Way, Waynesville, President of the State Board of Health; "The Prevention of Insanity by the Proper Treatment of Whiskey and Drug Habitués," Dr. Albert Anderson, Superintendent of the State Hospital, Raleigh; "Should North

Carolina Send Her Drug Habitudes to the Chain Gang or Give Them Humane Treatment?" Dr. W. M. Jones, Greensboro; "Chemistry of Patent Medicines," Dr. E. V. Howell, Chapel Hill; "Should the Religious Press Aid in the Sale of Liquor and Other Narcotics in North Carolina?" Dr. J. T. J. Battle, Greensboro; "What North Carolina Should Do in the Regulation of the Sale and Use of Narcotics," W. S. Rankin, Secretary State Board of Health, Raleigh. Many other interesting papers on subjects of this kind will be read and freely discussed.

The State Board of Health will hold its annual session during the 15th, 16th, and 17th. The following constitute the members of the Board: Dr. J. Howell Way, Waynesville, President, Dr. Richard H. Lewis, Raleigh, Mr. J. C. Ludlow, Winston-Salem, Dr. W. O. Spencer, Winston-Salem, Dr. T. E. Anderson, Statesville, Dr. Chas. O'H. Laughinghouse, Greenville, Dr. E. J. Wood, Wilmington, Dr. A. A. Kent, Lenoir, and Dr. Cyrus Thompson, Jacksonville.

The Board of Medical Examiners of the State will hold its next annual meeting in Greensboro, N. C., beginning June 8th. The following constitute the members of the board. Dr. J. F. Highsmith, Fayetteville, President, Dr. H. A. Ryster, Raleigh, Secretary, Dr. C. T. Harper, Wilmington, Dr. J. G. Blount, Washington, Dr. J. Q. Myers, Charlotte, Dr. I. M. Taylor, Morganton, and Dr. M. L. Stevens, Asheville.

The Eight District Medical Society of North Carolina held its annual meeting in Elkin, N. C., on May 5th. Mayor C. G. Armfield delivered a very appropriate address of welcome which was responded to by Dr. J. T. Burrus, of High Point, in his usual attractive style.

Drs. E. A. Lockett, of Winston-Salem, J. T. Burrus, of High Point, J. B. Whittington, of Winston-Salem, and E. G. Click, of Elkin, presented very instructive papers.

At the evening session, Dr. Reaves, of Greensboro, gave a lecture on "Child Life." After all the papers had been read and the business of the meeting transacted, about ten o'clock, the visiting physicians went to McTeer's warehouse where a banquet had been prepared under the management of the Civic League. Covers were laid for 360. Dr. M. A. Royall acted as toastmaster. During the evening short talks were made by Mr. J.

F. Hendren on "The Doctor," Dr. Z. N. Dixon on "The Ladies," Dr. Stanton on "The Doctor's Friends," and Dr. Burrus on "A little of Everything."

The next meeting will be held in High Point. Dr. D. A. Stanton was elected president for the ensuing year and Dr. W. M. Jones, of Greensboro, secretary and treasurer.

Dr. L. B. McBrayer, of the State Sanatorium at Aberdeen, attended the Southern Sociological Congress in Houston, Texas. He represents the State Medical Society and the State Board of Health. The title of his paper was "The Poor State and the Tuberculosis Problem." Dr. McBrayer also spoke in the First Baptist Church in Houston Sunday morning, May 9th.

Dr. S. L. Swygert of Greenwood, S. C., dropped dead on the afternoon of April 20th. He had just been addressing the house of delegates of the South Carolina Medical Association in session in that city in regard to erecting a monument to the memory of Dr. W. C. Rosewood who introduced and perfected the use of *veratrum viridi*. He had made a glowing tribute to that eminent physician. Just after taking his seat he fell over and died within a minute.

Dr. Swygert was widely and favorably known all over the state of South Carolina. He was a very prominent physician and had practiced his profession in Greenwood for nearly thirty years. He was a prominent "32" Mason and had been a Shriner for many years.

Dr. Geo. F. Sargent was recently appointed superintendent of the South Carolina State Hospital located in Columbia, S. C. He succeeds Dr. J. T. Strait, of Lancaster. The appointment took effect May 10th. Governor Manning, in announcing this appointment, had the following to say:

"I have appointed Dr. George F. Sargent superintendent of the State Hospital for the Insane. I have taken this action after several weeks' endeavor to find the man best fitted by training, experience and equipment for this position; one who is an expert in mental disease and care of the insane."

Dr. Sargent is thirty-six years old. He graduated from the College of Physicians and Surgeons in 1903. He served for two years as an assistant physician in the Worcester State Hospital for the Insane at Worcester, Mass. For some time he

served as assistant physician at the Northern Michigan State Hospital for the Insane at Traver, Mich. Since 1907 the doctor has served as assistant at the Sheppard and Enoch Platt Hospital for the Insane at Maryland.

The doctor was highly recommended for the position by many of the best known specialists in the country. We understand that his salary is to be the largest of any state official in South Carolina.

On May 4th the Sixth District Medical Society of North Carolina held a very interesting meeting in Durham, N. C.

The following were elected officers for the ensuing year:

President, Dr. N. M. Johnson, of Durham; Vice-President, Dr. E. A. Abernathy, of Chaper Hill; Councillor, Dr. R. L. Felts, of Durham; Secretary, Dr. A. S. Root, of Raleigh.

The Ninth District Medical Society of North Carolina held its fourth annual meeting in Lexington, N. C., in the Masonic Hall on April 13th. The meeting was of unusual interest. The President, Dr. J. E. McLaughlin of Salisbury, called the meeting to order and Rev. A. W. Plyler opened the meeting with prayer. Attorney J. Sanford Cowles delivered a very interesting address of welcome and Dr. T. E. Anderson made an appropriate reply.

The following papers were read:

"The Child Bearing Woman," by Dr. H. F. Long, of Statesville.

"Tetany," by Dr. J. P. Munroe, of Charlotte.

"Taxoemea and Its Relation to Certain Mental and Nervous Disorders," by Dr. James K. Hall, of Richmond, Va.

"Eye Injuries and Their Treatment," by Dr. A. M. Whisnant, of Charlotte.

"Duodenal Ulcer," by Dr. W. C. Tate, Banner's Elk.

"Goiter," by Dr. Addison Brenizer, Charlotte.

"The Fight Against Tuberculosis in North Carolina," by Dr. L. B. McBrayer, Montrose.

"Public Health," by Dr. W. S. Rankin, Raleigh.

"Feeble-Mindedness, Its Cause and Prevention," by Dr. C. B. McNairy, Kinston.

The officers for the ensuing year resulted in the choice of Dr. T. E. Anderson as president and Dr. Baxter Byerly as secretary.

Miss Ollie Bagwell, Asheville, N. C. a nurse in the Mission Hospital of that city was accidentally killed in the elevator shaft of the hospital while on duty in the institution April 7. Her head was caught between the elevator floor and the top jamb of the floor above, and death ensued almost instantly from a broken neck.

Orange County, N. C. has been elected by a conference of officials of the North Carolina State Board of Health and the Washington, D. C. United States Public Health Service as the next North Carolina county in which the Federal government will co-operate with the state and local health authorities in waging a campaign for sanitation. The work will extend from May to October, and will cover fully all possible methods and agencies for the prevention of disease and the bettering of general sanitary conditions on the part of every family and home in the county.

Governor Locke Craig of North Carolina announces the following professional appointments from this state: To the Southern Sociological Congress, Meeting in Houston, Texas, May 8-11: Dr. Chas. O'H. Laughinghouse, Greenville, Dr. F. M. Register, Tillery, and Dr. W. S. Rankin, Raleigh. To the Southern Commercial Congress, Chatanooga, Tenn. April 27-30: Dr. H. M. Fletcher, Asheville, and Dr. H. A. Royster, Raleigh.

Dr. James E. Daniel, Greenville, S. C. has been appointed second assistant Surgeon Belgian relief unit No. 1 of the American Red Cross and will sail at once for Europe to be assigned to duty on the field.

Dr. James S. Irvine of Danville, Va., died in that city April 10, 1915 in his forty-seventh year. He was a native of Wentworth, Rockingham County, N. C. and was graduated from the University of Virginia Medical Department in 1893. After several years general practice, a portion of the time being associated with Dr. Jno. C. Walton, who came from the same county in North Carolina, Dr. Irvine engaged in the practice of surgery exclusively in 1908 and achieved more than a local reputation as a skillfull operator. Though a man of delicate physical structure and none too vigorous body development, he was untiring and indefatigable in his professional work and on the morning of the day of his death

he had performed an abdominal section and some other operations in the hospital. Feeling not at his best before he did his usual daily round of work at the hospital, after his operative work for the day was concluded, he went to bed in the hospital and died a few hours later, it is stated, of acute indigestion associated with cardiac failure. In person Dr. Irvine was a most affable and agreeable gentleman who made friends everywhere and attained a well earned professional eminence. In addition to membership in the local medical societies he was an active member of the Virginia State Medical Society, American Medical Association, a Charter Member of the Tri-State Medical Association of the Carolinas and Virginia, a member of the Association of Surgeons of the Southern Railway and of the Southern Medical Association in addition to being a promoter and participant in the organization of the American College of Surgeons.

He was married in 1906 to Miss Katherine Patton who survives him. Peace to his memory.

At Charlotte, N. C. on April 8th before his honor Judge James Boyd there was tried in U. S. District Court the first North Carolina case for violation of Section 8 of the Harrison Anti-Narcotic law enacted by congress. The defendant was a negro woman of unsavory reputation and of more or less frequent former experiences with the criminal docket of the local courts. The only evidence against the defendant was having in her possession a considerable quantity of cocaine which it was alleged, but not proven, she kept for purposes of sale. Judge Boyd charged the federal jury to the effect that the jury must be convinced beyond a reasonable doubt that the defendant had either imported, or manufactured the cocaine, if it was that drug, or that she was holding it for the purpose of dispensing it. Said his Honor; "The Congress of the United States has no right to say that the 'possession of any article is unlawful, no matter what the wording of the statute may be.'" Much interest attaches to the case, notably in view of the farther fact that Judge Boyd referred to a decision of the North Carolina Supreme Court corroborating the decision he was making in that the Supreme Court had held the possession of a certain amount of whiskey was not sufficient evidence to procure a conviction of purpose to sell, though the state legislature so legislated.

The case of Dr. J. W. Williams, an aged practitioner of seventy-five years on the charge of violating a local police or municipal ordinance of the city of Richmond, Va. was promptly dismissed by the state's prosecutor recently when brought to trial in the city court. It appeared according to the evidence of the prosecution that Dr. Williams prescribed for a patient as much as sixty grains of morphine and permitted him to take it with him, an amount of the drug it was claimed "no reputable physician would prescribe." Dr. Jas. K. Hall, of Westbrooke Sanatorium, Richmond, Va., and formerly of the State Hospital, Morganton, N. C., was introduced as an expert witness by the state, but his testimony relative to the usage of narcotics by habitues was so striking a defense of the old Confederate veteran physician, that the prosecuting attorney immediately rose and requested the dismissal of the case which was done.

Dr. H. R. Black, Spartanburg, S. C. announces his retirement from general practice and his intention to devote his professional work solely to consultations and surgery after June 1, 1915.

Dr. W. Perry Reaves and associate, Dr. C. E. Reaves, Greensboro, N. C. have begun the erection of their new private infirmary building for the care of their patients.

Dr. E. H. Bolling, Durham, N. C. had his automobile stolen by a negro while making a professional call on the night of April 14.

Dr. Joseph Ward Hooper, Wilmington, N. C., was united in marriage with Miss Louise Bates Smallbones of the same city, April 15, 1915.

The Catawba County, N. C., Medical Society was reorganized at Newton, N. C., April 13, 1915. Dr. George H. West, Newton, N. C., was elected President, and Dr. George W. Shipp, Newton, Secretary-Treasurer. Every physician in the county with a single exception co-operated in renewing the organization.

Dr. Frank H. Holmes, Clinton, N. C., died in Asheville, N. C. on April 18, 1915 in his forty-fourth year. A native of Sampson County, N. C., he graduated from the University of N. C., and immediately engaged in the study of medicine at the University of Maryland where

he was graduated an M. D. in 1895. The same year he passed the North Carolina State Board of Medical Examiners, making an unusually high grade. He joined the state medical society and engaged in practice at Clinton, N. C., where he soon gained an enviable reputation as one of the leading practitioners of his section.

Dr. Holmes was a vestryman in St. Paul's Episcopal Church, Clinton, N. C., a member of the I. O. O. F., K. of P's and other kindred fraternities. He was an active and useful member of the State Medical Society and President of the Sampson County Medical Society, besides being affiliated with the A. M. A.

Dr. G. M. Cooper, Clinton, N. C., has been appointed Chief of the Bureau of Rural Sanitation under the direction of the North Carolina State Board of Health.

Dr. Cooper was president of the North Carolina State Health Officer's Association two years ago, and his work as wholtime county health officer of Sampson County, N. C., for nearly two years has given evidence of marked capacity for developing rural sanitary interests, and with his cordial and sympathetic co-operation it is expected to give substantial aid in further developing county health movements in the state.

Dr. James Buchanan Stoner, recently in charge U. S. Marine Hospital Pittsburgh, Pa. has arrived in Wilmington, N. C., and will command the service at that point succeeding Dr. Scott, temporarily in command, during the absence of Dr. C. W. Stiles.

The residence of Dr. G. D. Gardner, West Asheville, N. C., was practically destroyed by fire at an early hour on the morning of April 22, 1915 with a loss of more than \$1,000.00.

Dr. Oscar McMullan, Elizabeth City, N. C., one of the states' most esteemed medical gentlemen, is spending a few weeks on the Pacific slope.

The following are some of the well known North Carolina surgeons who have just returned to their homes after spending an active fortnight visiting clinics in Baltimore, Philadelphia, New York and Boston:

C. W. Banner, Greensboro, N. C.
S. H. Lyle, Franklin, N. C.
D. A. Garrison, Gastonia, N. C.
R. L. Gibbon, Charlotte, N. C.

G. W. Pressley, Charlotte, N. C.
D. A. Stanton, High Point, N. C.
L. S. Booker, Durham, N. C.
H. McKee Tucker, Raleigh, N. C.
R. S. Primrose, New Bern, N. C.
D. T. Tayloe, Washington, N. C.
J. H. Highsmith, Fayetteville, N. C.
E. T. Dickinson, Wilson, N. C.
M. H. Fletcher, Asheville, N. C.
P. R. McFayden, Concord, N. C.
J. P. Monroe, Sanford, N. C.
J. A. Williams, Greensboro, N. C.

Dr. J. D. Cochrane, Fayetteville, N. C., has returned to North Carolina after a prolonged stay in New York City doing post-graduate work and will remove to Nashville, Tenn.

Dr. W. S. Rankin, Secretary State Board of Health, has by direction of the Governor of North Carolina, begun an investigation into the condition of various prison camps in the state.

T. L. Love, a negro druggist at Raleigh, N. C., was convicted and fined \$300.00 in the local court May 1st on a warrant instigated by the Secretary of the North Carolina State Board of Pharmacy, alleging noncompliance with the North Carolina statute regulating the sale of narcotics in North Carolina.

Dr. H. D. Taylor, Professor of bacteriology and pathology at the Wake Forest Medical School (two year preparatory course) has tendered his resignation to the college trustees and will accept service with the Rockefeller Institute for Medical Research, New York City. Dr. Taylor will leave at the end of the present session to assume the duties of the new position.

The annual session of the Georgia State Medical Association was held in Macon, Ga., April 21-23. The meetings were well attended and a number of most excellent papers were presented and discussed. The president, Dr. W. B. Hardman, made a model presiding officer and the business of the Association was dispatched with rapidity leaving much time for the scientific work.

The officers elected for the ensuing year are as follows:

President—Dr. W. S. Goldsmith, Atlanta, Ga.

First Vice-President—Dr. O. H. Weaver, Macon, Ga.

Second Vice-President—Dr. George Smith, Rome, Ga.

Secretary-Treasurer—Dr. W. C. Lyles, A. H. Gladden, of Monroe.
Augusta, Ga. (Re-elected).

Delegates to A. M. A.—Dr. M. A. Clark, Macon, Ga. (re-elected), Dr. C. C. Harold, Macon, Ga., Dr. E. C. Davis, Atlanta, Ga. (hold over, having been elected to A. M. A. in 1914 for two years term).

Councillors for two districts were also elected: Tenth District, Dr. J. A. Price, Milledgeville, Ga. Twelfth District, Dr. E. T. Coleman, Greymount, Ga.

The State Association cordially endorsed the invitation to be extended by Atlanta, Ga., to the A. M. A., which will be presented and urged at the coming San Francisco meeting, to hold the 1916 session of the A. M. A. in Atlanta. The A. M. A. has not met in a Southern city since the great meeting in New Orleans in 1903 and the Journal joins its Georgia friends in extending the invitation to meet in Atlanta in 1916, and urge the claims of our great Southern metropolis to the honor. The years that have passed since a meeting of the great national medical association met in the South suggests its managers should heed the call of the South for the next meeting to be held within its borders, while the splendid hotel equipment of Atlanta to which additions are being frequently made, removes an objection that has oftentimes been considered as against the claims of the smaller of the great cities of the country to properly house and care for the thousands who attend the A. M. A. session.

Atlanta is equal we believe to properly entertain the Association, and cordially endorsing her claims, we urge Southern delegates to the A. M. A. to line up for "Atlanta in 1916."

Dr. J. G. Johnston, formerly of Chester, S. C., has located in Charlotte, N. C., where he will devote his entire time to diseases of the eye, ear, nose and throat.

The Louisiana State Medical Society held its thirty-sixth annual meeting in Lake Charles, La.. The officers for the ensuing year are as follows: President, Dr. J. C. Willis, of Shreveport; first Vice-President, Dr. T. H. Watkins, of Lake Charles; Second Vice-President, Dr. A. Henriques, of New Orleans; Third Vice-President, Dr. J. M. Moseley, of Arcadia; Secretary-Treasurer, Dr. L. R. Dubuys, of New Orleans, Councillors: third congressional district, Dr. J. W. Shaw, of New Iberia; sixth congressional district, Dr. J. J. Robert; eighth congressional district, Dr. E. Lee Henry, of Lecompte. Chairman of the house of delegates, Dr.

The annual session of the Medical Association of Alabama was held in Birmingham, April 20 to 24, 1915. Dr. W. P. McAdory, Dr. J. S. McLester, Dr. B. S. Lester, Dr. E. W. Rucker, Jr., and Dr. W. R. Scott made up the committee of arrangements. The interesting address given by that master in sanitation, Surgeon General William C. Gorgas, United States Army, on the Sanitation of the Panama Canal Zone was very full. Another noteworthy event was the Oration in Surgery by Dr. William Seaman Bainbridge, of New York, which dealt with the sanitation of the gastrointestinal canal. Doctor Bainbridge, who has made the treatment of gastrointestinal troubles an especial study, discussed the matter in a special way. It may be said that the meeting was the largest on record and combined in a most happy manner, scientific and social concerns. From the social point of view a feature of the meeting was a banquet given by Dr. W. L. Wyman, of Birmingham, at which among others were present Surgeon General W. C. Gorgas, U. S. A.; Dr. William Seaman Bainbridge, of New York; Dr. W. W. Harper, of Selma, Ala.; Dr. J. M. Mason, of Birmingham, Ala.; Dr. B. B. Sims, president of the association, of Talladega; Dr. R. M. Cunningham, Lieutenant Governor, of Birmingham, Ala.; Dr. S. Harris, of Mobile; Dr. J. D. S. Davis, of Birmingham; Dr. John Baker, of Montgomery; Dr. John W. Elliott, Jr., of New Orleans, La., and Dr. Lewis C. Morris, of Birmingham.

BOOK NOTICES.

Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Charge of Chas. L. Mix, A. M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume 1. General Medicine. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Illinois Post-Graduate Medical School. Series 1915. Chicago: The Year Book Publishers, 327 S. La Salle Street.

The present volume is one of a series of ten issued at about monthly intervals

and covering the entire field of medicine and surgery. Each volume being complete for the year prior to its publication on the subject of which it treats. This series is published primarily for the general practitioner. At the same time the arrangement in several volumes enables every one interested in special subjects to buy only the parts they desire.

This volume contains 399 pages. The index is very complete and there are many appropriate illustrations artistically gotten up on fine enamel paper. The illustrations in the chapter on Diseases of the Heart are particularly valuable. In all probability this chapter is the most valuable of any in the book.

Price \$1.50.

Surgery of The Blood Vessels. By J. Shelton Horsley, M.D., F.A.C.S., Surgeon In Charge of St. Elizabeth's Hospital, Richmond, Va.; a Founder and Fellow of the American College of Surgeons; Ex-President of the Richmond Academy of Medicine and Surgery; Member of Southern Surgical and Gynecological Association, etc. Illustrated. St. Louis: C. V. Mosby Company, 1915. Price \$1.00.

This is a book of 304 pages very nicely bound. It is printed on heavy high priced enamel paper. Possibly this high priced paper was used on account of the numerous illustrations that appear throughout the volume. These illustrations are quite appropriate and without them the book would be very defective. With them and the index, the reviewer can say that it is far in advance of any literature on the subject.

It has been the aim of the author to present the scientific and the laboratory features of vascular surgery and particularly its practical aspects that may be of interest both to the surgeon and to the general practitioner. Therefore the treatment of hemorrhage, pathologic and traumatic, and such subjects as aneurisms, thrombosis and embolism, congenital nevi, varicose veins, and hemorrhoids are described as well as the history and technique of suturing blood-vessels and transfusion of blood.

It gives the editor of this Journal very great pleasure to recommend this very valuable volume.

Practice of Medicine. By Walter Sands Mills, A.B., M.D., Professor of Medicine, New York Homoeopathic Medical College and Flower Hospital; Physician to the Metropolitan Hospi-

tal, and to the Tuberculosis Infirmary, Department of Public Charities. Boericke & Tafel, Philadelphia, Pa. 1915. Price \$5.00.

This is a handsome volume of 705 pages. The author has devoted a great deal of time in preparing it. Three years prior to its appearance he devoted practically all of his time to making it as perfect as possible. None of the essentials of practice have been omitted and yet the book is one that is concise in statement.

The architecture or arrangement of the book as a whole is unusual and very appropriate. In arranging many of the chapters the author has drifted away from the usual arrangement. For instance syphilis and tuberculosis have been treated as general infections in the section on Infectious Diseases. Tonsillitis has been included in the section on Infectious Diseases where unquestionably it belongs. Erysipelas and Septic Poisoning also belong in that section. This is quite proper even if it is usually omitted in works on Practice. It was also equally appropriate for him to incorporate in his book on Practice a section on Mental Diseases and Psychoses. This section, of course, gives a description only of some of the more common forms of insanity, Hysteria and Epilepsy. As a rule subjects like these appear only in books on Nervous Diseases.

There are no illustrations but the book is attractively written. The reviewer unhesitatingly recommends it.

Infection and Immunity. A Text-book of Immunology and Serology. For Students and Practitioners. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology and Experimental Medicine, College of Physicians and Surgeons, Baltimore; Pathologist to the Union Protestant Infirmary, the Women's Hospital of Maryland and the Mercy Hospital, Baltimore. Third Edition, enlarged and thoroughly revised. Octavo, 351 pages, illustrated. Cloth, \$3.25 net. Lea & Febiger, Publishers. Philadelphia and New York, 1915.

The rapid and extensive advances of science in this field have made the revision of this work no perfunctory task, although less than two years have elapsed since the appearance of the second edition. Every line has been subjected to careful scrutiny and brought into complete accord with the latest information. Entire sections have been added

and a vast amount of new material incorporated. Resultantly the new Infection and Immunity embodies every advance in this vitally important department of medical activity, with illuminating comment which renders the material presented of easy comprehension by the student and immediately available for the use of the practitioner.

In its previous editions Simon's work gave to the profession a clear, practical, and peculiarly useful presentation of all that experimental medicine has accomplished in this field. These characteristics are retained, while the changes and additions made by the author in the preparation of the new third edition exactly measure the progress of the sciences of immunology and serology.

Dr. Simon has, in one compact volume of high didactic quality, opened up for student or practitioner the whole subject of infection and immunity. Moreover he deals with a profoundly conscious effort by the reader.

The author has not failed to note and comment upon every addition to our knowledge of this subject. The consideration of anaphylaxis; active and passive immunization; auto and normal serum therapy; ferment and allergic reactions; the chemo-therapy of the pneumococcus and of cancer, and the serum diagnosis of pregnancy have been notably developed.

The recent advances in the study of Abderhalden's protective ferments and the associated technic are exhaustively presented. The section on the Wasserman reaction has been entirely rewritten. Detailed consideration is accorded methods of minimizing the danger from anaphylactic shock during serum treatment. The author carefully reviews the observations of Schick on the recognition through allergic skin reactions of individuals whose blood normally contains diphtheria antitoxin in quantities sufficient for protection. The possibilities of better results in the serum treatment of tetanus through an improved technic is dwelt upon, and the potentialities of vaccine treatment in Hodgkin's disease are suggested. Minute attention is given immunity in various diseases; to the preparation of autogenous and other vaccines; to methods of immunization, and to the technic of immunization tests.

The plates are perfect in color and conformation and are selected and placed with discrimination. The author's delightful style and successful avoidance of obscure technicalities adds to the in-

terest of a fascinating study.

Simon's work offers the student a condensed yet adequately complete manual, in a subject whose literature is voluminous, with full attention to laboratory technic. It is, moreover, a safe guide in more investigations. To the practitioner it affords that grasp of principles and methods which enable him fully to avail himself of the aids that the modern laboratory places at his disposal in the diagnosis, control and treatment of disease.

A Practical Treatise on Diseases of the Skin. By Oliver S. Ormsby, M.D., Professor of Skin and Venereal Diseases in the Rush Medical College, Chicago. Octavo, 1168 pages, with 303 engravings and 39 plates in colors and monochrome. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York.

Dr. Ormsby's recognition as one of the world's foremost dermatologists gives to this work the stamp of high authority. He has brought to the task of preparing a complete consideration of present-day dermatology, with its broadly divergent aspects, peculiar qualifications resulting from thorough study and broad clinical observation, and has not failed to profit by his long association with the late Drs. J. Nevins Hyde and Frank Hugh Montgomery. The appearance of his work at this time is particularly opportune, resulting in a careful, up-to-date, and final review and co-ordination of the numerous and important additions to the knowledge of this subject recently reported from various parts of the world.

The volume is concise but its descriptions of cutaneous conditions are sufficiently detailed to be of real value to practitioner, specialist or student. Many new diseases have recently been differentiated, and new facts discovered concerning the nature and course of previously known diseases. All these findings are taken up and harmoniously developed in the author's finished consideration of the subject.

The striking results of recent research in the etiology and pathology of cutaneous diseases are assigned their proper places, and the newer methods of diagnosis are presented at length. The literature of the subject has been thoroughly reviewed and the author has not overlooked the rich fund of valuable material in the treatise of his distinguished colleague, Dr. Hyde. His quotations

from the opinions of leading dermatologists, with references, afford the conscientious student a useful starting point for his further investigations.

The consideration of treatment is well developed, and the directions are most explicit. His therapeutic recommendations are clear and positive, and include not only the standard treatments, but the special methods which have been so extensively developed during the past few years.

The superb series of illustrations and plates includes some from the standard treatise of Dr. Hyde, and a very large number from new and original photographs in the author's own collection and in those of his colleagues in recent dermatological research.

Its authoritative statement, clear explanations and concise diction make this volume peculiarly adapted to students' use. For the specialist it offers a complete summing up of present-day knowledge and practice in this rapidly developing field. For the practitioner its usefulness is established by its availability both as a reference book and working manual and by the emphasis placed on diagnostic factors and on treatment.

Materia Medica and Therapeutics. A Text Book for Nurses. By Linette A. Parker, B. Sc., R. N., Instructor in Nursing and Health, Teachers College, Columbia University. 12mo, 311 pages, illustrated with 29 engravings and 3 plates. Cloth, \$1.75, net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

The author has carefully and with much discrimination weighed the knowledge of *Materia Medica* and *Therapeutics* requisite to the highest efficiency in the nurse, and has planned her work to embody precisely this material. Her aim has been not to qualify the nurse to take the place of the prescribing physician or the compounding pharmacist, but to give her that grasp of the subject which will enable her to handle and administer drugs with intelligence. She has carefully avoided the inclusion of material that will not be specially useful to the nurse.

She has brought to the preparation of this volume a comprehensive knowledge of *Materia Medica* and a keen insight into the problems of the nurse and her special needs as regards rational training. The student whose careful study of this volume is supplemented by class room demonstrations of the appearance and characteristics of drugs along the lines

clearly indicated by the author will bring to the performance of her duties just that degree of knowledge that is most likely to serve the needs of the physician in attendance and the interests of the patient.

Essential facts only are presented, and details that might confuse the mind of the student are avoided. The nurse learns from this volume not only that certain drugs are administered in certain conditions, but the reasons for their selection. Recognizing the nurses' view point, the author places emphasis not on the fact that a certain drug is prescribed in a certain condition, but on what action the drug ordered by a doctor may be expected to have, what untoward effects may be looked for, and the emergency procedure pending the physician's arrival in case of an overdose.

In the preliminary sections, tables, technic and the necessary definitions are clearly stated and explained. The consideration of drugs is logically arranged by systems—nervous, muscular, circulatory, etc.—with an additional section devoted to specifics and drugs which affect nutrition. A concise chapter on legislation concerning poisons and habit-forming drugs includes consideration of the Harrison law, indicates just which drugs are restricted and how to conform to the law. In the chapters on Psycho, Hydro, Electro, Serum and Ray Therapy a clear insight is given into a department of scientific medicine, access to which has heretofore been had only through the most technical of medical treatises.

The illustrations are at once striking, appropriate and illuminative. The author's easy style, faculty of clear expression and ability to absorb the interest of the reader add to the usefulness of a book in which the scope and purpose indicated by the title are never departed from.

Clinics of Jno. B. Murphy, M.D. At Mercy Hospital, Chicago. April, 1915. Published Bi-Monthly. Philadelphia and London: W. B. Saunders Company. Price \$8.00 per year.

This copy is a paper bound volume of 382 pages. As usual it is printed on beautiful white paper. The illustrations are especially fine and each article has one or more half-tone cuts illustrating the text. Possibly these clinics of Dr. Murphy's are more completely and attractively illustrated than any that come to this office.

His first clinical talk on Osteomyelitis is perhaps more interesting than the sub-

sequent chapters. The reviewer can hardly see how any surgeon could wisely get along without these volumes.

A World Uprising Against Alcohol.

In France there is on foot a temperance movement led by the strongest newspapers, with the approval and adherence of many public men. Early in the war one of the worst of alcoholic beverages, absinthe, was suppressed by the French Government, but other kinds of strong drink are easily obtained and their use is prevalent. The French movement aims chiefly at bringing the sale and use of liquors under regulation by a more effective kind of licensing, a prohibition of the stronger kinds of liquor that are being substituted for absinthe, and a sharp limiting of the hours during which drinks are sold. There is no movement in France against the making, vending, and ordinary use of domestic wines, in which the percentage of alcohol is not great. But there is likely to be a strong effort made to diminish the use of distilled liquors, and to regulate much more strictly the whole drink traffic, including the wine shops. Never before has France shown such seriousness of moral purpose; and it is believed that permanent social changes for the better are taking root.

The agitation in England, however, is just now the foremost topic in the world-wide movement against alcohol. It is hard for Americans who have not witnessed the thing themselves to realize the extent to which the working classes in the British Islands are addicted to drink, and the immense political and social power that the liquor traffic has long exercised in the United Kingdom. This traffic, together with the landed aristocracy and the established church, has been one of the three chief supports of Conservatism. But England is gradually taking the war seriously; and the foremost military and civil authorities find intemperance a handicap. They have even declared that the drink question was important enough to amount quite possibly to the difference between success and failure in the great struggle. The use of drink can, of course, be controlled in the army training camps, though stern measures have had to be used to protect the enlisted men against the drunkenness of the civilian environment. Of late, the drink question has been discussed from the standpoint of the efficiency of industrial workers. England is building great numbers of

ships, and making all kinds of amunitions and army and navy supplies. British workmen in shipyards, dock laborers, factory employees making guns and a hundred other things, are more concerned about short hours of labor, union rules, their endless potations, and their sports, than about the nation's welfare in this time of crisis.—From "The Progress of the World," in the American Review of Reviews for May.

Reprints Received.

A Unique Case of Artificially Induced Sterility, by William J. Robinson, M. D., New York. Reprinted from the New York Medical Journal.

Chancroids and Their Treatment by the General Practitioner, by William J. Robinson, M. D., New York.

Tragedies in a Sexologist's Practice, by William J. Robinson, M. D., New York. Reprinted from the American Journal of Clinical Medicine.

A Case of Paroxysmal Hemoglobinuria Treated With Salvarsan With Disappearance of the Characteristic Blood Reaction, and of the Positive Wassermann Reaction, by Walter V. Brem, M. D., Los Angeles. Reprinted from the California State Journal of Medicine.

Some of Our Problems, by Isadore Dyer, Ph. B., M. D., New Orleans, La. Reprinted from Texas State Journal of Medicine.

Scientific Medicine vs. Quackery. Should Ignorant Laymen be Permitted to Treat the Sick? By William J. Robinson, M. D., New York City. Reprinted from The American Journal of Clinical Medicine.

Gonorrheal Epididymitis and Its Non-operative Treatment, by William J. Robinson, M. D., New York. Reprinted from The New York Medical Journal.

Chronic Prostatitis and Its Treatment by the General Practitioner, by William J. Robinson, M. D., New York. Reprinted from The Medical Record.

Some Fatal Surgical Errors, by J. Shelton Horsley, M. D., Richmond, Va. Reprinted from the Boston Medical and Surgical Journal.

The Pryor Method of Treatment for Puerperal Septicaemia, by Arthur S. Brinkley, M. D., Richmond, Va.

The Diagnosis and Treatment of the Commoner Thyreopathies, by Lewellys F. Barker, M. D., Professor of Medicine, Johns Hopkins University. Reprinted from the Southern Medical Journal.

Abstracts of the Leading articles of the month.

A New Treatment of Epilepsy Based Upon Pathogenesis.—By Tom A. Williams, M. B., C. M., Edin., Washington, D. C. (Published in the Interstate Medical Journal and Review of Neurology and Psychiatry, April, 1915.) The general assumption that the cause of epileptic convulsions is cerebral defect only is contradicted by the occurrence of convulsions in uremia and puerperal eclampsia. In these conditions the convulsions cease along with the toxicosis. Experimental induction of epileptic seizures by abstinence corroborate this.

As not every cortical injury or neoplasm produces epilepsy, the author assumes a toxic factor in addition. The leucocytosis, digestive disturbance, urinary toxicity and excess of serum nitrogen which many cases show, are confirmative.

Two modes of treatment present themselves aside from the reprehensible attempt to narcotise cerebral irritability which only deceives the therapist but does not cure the disease. The first is to increase elimination. This aim is inadequate as not attacking the source of the disease, and some of the procedures used, particularly purgation, are injurious in still further disturbing the nitrogenous metabolism.

The experiment attempted by the author was to prevent the toxic condition supposed to cause the attack. This he did in the cases described (1) by a limitation of the dietary protein; (2) by giving most of this at midday so that it may be metabolised before sleep; (3) by facilitating osmosis through giving abundantly of the salts of the alkalis as fruits and vegetables; (4) by supplying sufficient calories by means of the fatty and carbohydrate foods; (5) by preventing constipation by means of an adequate bulk of non-putrescible pabulum. These principles are embodied in the "model diet."

A girl of 15 showing renal inadequacy, who had epileptic attacks for four years, has remained well since the treatment began in February, 1914. A man of 27 who had attacks for four years which were rapidly aggravating has had none since he was prescribed for in 1911.

Holiday excesses provoked an attack in a school boy three years ago; a proper regime restored him to health. He is not under observation, but only one other attack is said to have occurred.

The attacks of a man with sclerotic changes of the brain were quickly cut short by the "model diet."

The relation of migraine to epilepsy is mentioned; and a case of recurrent headache is chosen to show the common pathogenesis and cure.

Finally the purely secondary role of emotion is indicated.

The Use of Neosalvarsan in Mental Deficiency.—Findlay in the Glasgow Medical Journal reports four cases treated by neosalvarsan.

Each of these four cases was a very marked example of mental deficiency, three of them being frankly idiots. The treatment in all had a most salutary effect, and although it did not bring them up to a normal level, it made it possible for two of them to be educated, and to look after themselves. In milder cases, and especially if the treatment were commenced earlier, it might be possible to obtain complete cures. Unfortunately one of the children died, but so long after the cessation of the neosalvarsan administration that the writer does not think the issue can be ascribed in any way to the drug. It is more likely that the mischief, which had been progressive before the child came under observation, was arrested by the treatment, and that it, several months later, relapsed with the development of a gumma. Unfortunately no postmortem examination was performed, and thus the writer's opinion can only remain conjectural.

Findlay concludes as follows:

1. Syphilis is a frequent cause of idiocy.
2. In syphilitic idiocy there may be no luetic stigmata.
3. Neosalvarsan when introduced intravenously or intramuscularly has a very marked effect in improving mental condition.

Preliminary Stages of Diabetes.—Bergell (Deutsch. med. Wochenschr.) says that it has long been known that,

in doing Trommer's test for sugar, we find that the alkalinized urines of diabetics dissolve much more copper sulphate than those of normal individuals. This phenomenon, the writer believes, may be used diagnostically. The urine to be tested is diluted to a specific gravity of 1012. To 20 c.cm. of the urine add 7 c.cm. of 15 per cent. NaOH, and shake once. Then add 3c.cm. CuSO₄ solution and shake well. Filter. The urine of normal individuals will barely be colored. That of diabetics and of certain groups of individuals will show a deep blue color.

If a mild case of diabetes be put on a carbohydrate-free diet, the sugar will first disappear from the urine, the color test remaining positive. After a few days the latter will also disappear.

If normal individuals, with negative color test, be given 30 grm. dextrose in solution, the color test will become positive, although no sugar appears in the urine.

The color test is rarely positive in normal individuals except among the descendants of diabetics. Of such adult descendants, 60 per cent. show a positive reaction, while the juvenile descendants give a positive test in 80 per cent. of the cases studied. In all of them, the test could be rendered negative by means of a carbohydrate-free diet.

These observations lead the doctor to infer that a positive reaction in the absence of glycosuria indicates a preglycosuric stage of diabetes. Patients with a positive color reaction should be treated like mild cases of diabetes and the test should be kept negative in their urines by means of a restricted carbohydrate intake. In this manner, it may be possible to prevent, or at least to defer, the development of a true diabetes.

The Value of Tuberculin.—Raw vouchsafes (Liverpool Med. Chir. Jour.) says that after treating over a thousand patients with injections of tuberculin, that it is a remedy of the greatest value, especially in early cases and where the deposit of tubercle is localized, as in one apex or in a lymph gland or single joint; but where the tuberculosis is disseminated and complicated by secondary infections, the use of tuberculin cannot be expected to be of much avail. It ought, however, to be tried in every case with the hope of some relief or possible benefit, as we cannot allow the patient to suffer and die without making every effort to arrest the progress of the disease.

Tuberculin is not going to revolutionize the treatment of tuberculosis. It is

a valuable aid to the other methods of treatment, hence it must be used with care and discrimination and with full knowledge of its dosage and therapeutic effects.

The Comparative Toxicity of the Urine, Serum and Milk during Pregnancy—Werner and Kolisch (Arch. f. Gynak.) have investigated this subject with particular reference to eclampsia, using for the purpose a series of guinea-pigs. It appears that the urine and serum of normal nonpregnant individuals is nontoxic. The urine of healthy pregnant women is toxic, which diminishes during labor, increases in the puerperium and reaches its maximum point on the third and fourth day of labor. In nephritis the toxicity of the urine is increased. In eclampsia this is reduced during labor, increased immediately after but is not at any time higher than that of normal women in the same period of pregnancy. The serum of healthy gravid individuals in contrast to those not pregnant, is toxic but this diminishes during labor and increases again in the puerperium, reaching its maximum on the third day. In nephritis the toxicity of the serum is increased. The serum of eclamptic subjects before labor is toxic if edema is absent but is apparently not toxic when edema is present. The serum of eclamptics during the puerperium is usually only toxic when edema is present. Colostrum is only toxic to a slight degree, the maximum being reached on the third day. The milk of nephritic women does not show any increase in toxicity beyond that of normal subjects. The same relation appears to exist in the milk of eclamptic women and no increase in the toxicity of the colostrum during eclampsia could be established. Although the edema fluid of nephritics is toxic, this is not so in the presence of eclampsia, although this fluid from eclamptic women is toxic. The toxicity of the edema fluid appears to stand in reverse relation to that of the serum. The poison which appears during pregnancy in the urine, serum and milk, possesses neither antigens nor antiphylactic properties. The results which have been obtained by biological methods with the urine, serum and milk of eclamptic women do not appear to stand in any relation with the clinical picture of the urinary findings in eclampsia. Symptom complexes which have hitherto been regarded as characteristic for anaphylaxis may also be found in pericardial hemorrhages. In order to avoid

The Cardiac Patient

needs constant attention to his digestion and nutrition. A little depression of the general vitality and the compensation of the heart may be lost forever. At the first sign, therefore, of nutritional decline

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should be administered. This dependable tonic contributes directly to an increase of cardiac power, and at the same time through improving the digestion and promoting the efficiency of vital functions generally, promptly reduces the stress under which a flagging heart has been forced to labor.

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errors it is absolutely necessary that all experimental animals be killed by chloroform as soon as possible and then autopsied.

Miscellaneous.

The Guilford Hotel, Greensboro, N. C., offers its hospitable entertainment to the visitors to the State Medical Society meeting in June. It is a well appointed hotel with comfortable apartments, a liberal cuisine including at all times the very best the market affords, and under experienced management its genial proprietors do not hesitate to assert their ability and disposition to satisfy the most exacting of the profession who grace the Greensboro meeting with their presence.

ad-6-15

Cagulen Ciba.

Chemical:—Coagulen Ciba has all the characteristics of a lipid. Owing to the enormous difficulty of analyzing such complicated organic bodies, the exact chemical formula cannot be given today, but so much may be stated:

Coagulen Ciba is an extract of blood platelets and contains: Cytozym (Fuld, Bordet and Delange) or Thrombokinas (Morawitz) or Thrombozym (Nolf).

By whatever name called, this substance withstands a temperature of 100 deg. C. for several minutes, and when added to animal blood, combines with the Thrombogen (Nolf) or Serozym (Bordet and Delange), existing in solution in blood to form Thrombin or Fibrin Ferment.

Properties: Coagulen Ciba is a yellowish granular powder with but slight odor, a sweet taste, and is readily soluble in water or a normal salt solution, and when dissolved, may be sterilized by boiling for one or two minutes, without injury to its coagulating properties.

Pharmacologic Action: Coagulen Ciba is a physiological hemostatic and produces its effects by strengthening and accelerating the natural process of coagulation. To the Thrombozym (Cytozym) already present in blood, it adds still more and the two together combine with the Thrombogen to form Thrombin, which is the real substance that causes the transformation of fibrinogen into firm fibrin, which transformation we call coagulation. The use of Coagulen Ciba in checking hemorrhage keeps the blood coagulation entirely within the bounds of a physiological process, and is, therefore, harmless and free from irritating effects.

Therapeutic Indications—Coagulen Ciba may be administered:

(a) Locally by direct application to the bleeding surface, either by spraying or by tamponage.

(b) By the mouth.

(c) By intravenous injection.

(d) By subcutaneous injection.

(e) By (c) and (d) combined or even by (b), (c) and (d) combined.

Doctor Anton Fonio, First Assistant Physician of the Surgical Clinic of the University of Berne, Switzerland, and Chief Surgeon of the District Hospital of Langnau, near Berne, has recently published his experience in the treatment of about 700 cases with Coagulen Ciba by all methods of administration, and states that in no case was any septic effect observed. His experience was confirmed by Kausch after treating 300 cases as well as by Dr. H. Obermueller, after an exhaustive study of its use in rhinological operations.

Fonio has also demonstrated that the danger of embolism or thrombosis from the intravenous or subcutaneous administration of Coagulen Ciba does not exist when proper methods are used and when not contra indicated as in cases of advanced arterio-sclerosis, aneurism, phlebitis, etc.

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It follows, from the above, that Coagulen Ciba is indicated in all cases of local hemorrhage, whether resulting from wounds, disease or surgical operations, in parenchymatous, concealed, inaccessible and pulmonary hemorrhage, hemophilia, in surgical operations as a prophylactic and to keep the field of operation clear when bleeding is profuse, as well as to shorten both the time of operation and the healing process. It is indicated also in gynaecology, laparotomy and operations on bony structure and in the eradication of tumors.

Dosage:—A Coagulen Ciba solution must be made just before using and thrown away afterwards, as it does not remain sterile. It is quickly prepared by dissolving the powder in a sterilized physiological salt solution, such as is kept in every hospital and afterwards sterilized by boiling for three minutes. A 5 per cent. solution is recommended, but some authorities prefer a 10 per cent. solution, and in urgent cases, ordinary pure water may be used in place of the sterilized salt solution.

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jection, Fonio's more extended experience has led him to prefer a $3\frac{1}{2}$ per cent. solution. For adults, the total amount of Coagulen Ciba to be injected, should be 5 grams dissolved in 143 c.c.m. of water. Of this 30 to 70 c.c.m. should be used intravenously and the remainder subcutaneously, in order to obtain an energetic and prolonged action. Should headache, swimming in the head or other unfavorable symptoms occur, the intravenous injection must be stopped at once and replaced by the subcutaneous, when as much as 10 grams of Coagulen Ciba may be administered.

The chief requirement in the use of Coagulen Ciba is to apply it at the exact point of bleeding. This may be done by spraying or the use of a mop or tampon. When a mop is used, it is of the utmost importance to lift it straight up and down and not to brush the bleeding surfaces, which would tear away the coagulating blood.

The New McAdoo Hotel, Greensboro, N. C., has recently been extensively remodeled and refitted at considerable expense and will afford an attractive place of abode for members attending the forthcoming session of the State Medical Society. It is conducted on the European plan and will offer special facilities to the visiting physicians during the session, besides leaving no effort unspared to render the very best service possible to its guests at all times. ad-6-15

The tightening by legal restrictions on the sale of narcotics, especially opium and its derivatives, have brought very little inconvenience to physicians who have, by clinical test, become acquainted with the sedative and pain relieving properties of PNEUMO-PHTHYSINE.

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Independence between Development of Placenta and Embryo.—Sencert and Aron (Rev. de gyn.) give the history and microscopical examination of the specimen obtained from a case of ovarian pregnancy. The embryo had disappeared at the time of operation, but there remained in the ovary a structure representing the placenta and having an umbilical cord, with veins and an artery in it. The patient became pregnant immediately after marriage, but instead of birth there was a cessation of symptoms of pregnancy coincident with the appearance of pains in the ovarian region of one side. The pain and disability existed for two years, ending finally in an operation for a small ovarian tumor. When the specimen was examined it revealed that there had been an ovarian pregnancy. No trace of the embryo was left, but the remains of the placenta were incorporated with the ovary. Ovarian pregnancies reported in literature are extremely few. A minute examination of the specimen is necessary to establish the diagnosis, and we must demonstrate the absence of the corresponding ovary, the union of the fetal sac with the uterus by the ovarian ligament, the presence of ovarian tissue in the walls of the fetal sac, and the independence of the tube from the formation of the fetal sac. All these conditions were satisfied in this specimen, except the first, and here we have a part of the ovary remaining. The remains of the placenta showed it to belong to the primordial avillous period of the placenta. It was an undivided protoplasmic mass, with many nodules, and blood spaces. The author supposes that the fetus died at an early period of pregnancy and that it was absorbed. Either the embryo did not develop because the villi were not formed, or death caused the regression of the placenta and the villi were lost. During the two years during which the painful phenomena existed the uterus and ovary on the other side became atrophied, but after the operation they again enlarged and the patient again became pregnant. Probably a layer of glandular cells situated around the insertion of the placenta were the cause of the amenorrhea and uterine atrophy that were observed, acting as a gland of internal secretion.

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The Diagnosis of Post-Pyloric Ulcer.

--Cole, Lewis George, in *The London Lancet*, deals solely with the method of diagnosing post-pyloric ulcer, and, with one or two exceptions, all of the illustrations have been proven by surgical operation. Evidence has now been assembled to show that the portion of the gastrointestinal tract which was previously called the first ascending portion of the duodenum is not a part of the duodenum at all, but really belongs to the stomach, and the name cap of the stomach has been applied to it. The term post pyloric ulcer, or ulcer of the cap, should be substituted for duodenal and is so used in his article. Radiology has played an important part in the medical and surgical diagnosis of this condition. There have been many communications from various parts of the world having a direct or indirect bearing on the diagnosis of these ulcers. Two methods have been employed—one is based upon the symptom-complex, or clinical manifestations, some of which have been recognized by radiography; the other method depends on the contention that bismuth will adhere to the ulcer or lodge in its crater. The technique of serial radiography depends upon the rapid and instantaneous photographing of different cycles and different phases of one cycle of the stomach's action. While the progress of the peristalsis may be seen in all cases, Cole has described a much more complicated gastric motor phenomena, which is like the heart's action and takes place in cycles marked by periods of systole and diastole, or a contraction and relaxation of all the peristaltic simultaneously. The period of systole consumes seven-tenths of the gastric cycle and the remaining three-tenths of the cycle are consumed in diastole when the pyloric sphincter closes and prevents the chyme in the cap from dropping back into the stomach. Cole says this is called attention to the fact that there is no evidence of ueriodical opening and closing of the pyloric sphincter independent of the gastric cycle. The cap, which he shows in his pictures, acts, he believes, as a reservoir where the finishing touches of gastric digestion may be applied to the small amounts of chyme, thus isolated from the bulk of the food in the stomach. The method he employs in diagnosing post-pyloric ulcer is based upon the examination of some 500 cases, and recognition by means of serial radiography of

a constant deformity of the cap caused by the induration or contraction surrounding the crater of an ulcer, or resulting therefrom. The authors findings are of extraordinary value. He calls attention to the fact that when one or two, or a dozen radiographs are used they may lead to error and sometimes reflect discredit on this method of diagnosing. The induration of an ulcer may be seen projecting into the lumen of the cap, causing a displacement of the bismuth, which is as constant as one's finger prints in a ball of putty. On the other hand, it may be so small as to present only a dent on the side of the cap, or the process may involve such a large area as to obliterate one-half of the cap without changing or distorting the other half. A positive diagnosis between post-pyloric ulcer and adhesions of the cap from gall bladder infection cannot always be made exclusively from the radiographic findings. Gall-bladder infection usually presents a more extensive involvement of the pylorus and cap or may involve the greater curvature and draw the stomach to the right, causing an angulation of the cap.

The Sterilization of Potable Waters by Means of Calcium Hypochlorite.—

Thresh, in *The London Lancet* says that the amount of chlorine required to sterilize a filtered water varies exceedingly, not only with waters from different sources, but with water from the same source at different times. Having had to sterilize some millions of gallons daily for nearly two years the writer has found it necessary to make daily examinations of the raw water to determine the amount of chlorine to be added, and he is convinced that the only safe course in sterilizing water for troops is to add an excessive amount of chlorine and at the end of fifteen minutes remove the excess. In no case should less than 1 part chlorbe added to 1,000,000 parts of water, and if the water is known to be foul, as when derived from a polluted river, 2, 3 or more parts should be added.

To the various military officers who have recently consulted the writer on the subject he has made the following recommendations:

1. Obtain a supply of high quality chlorinated lime in the $\frac{1}{4}$ -pound hermetically sealed tins.
2. A correspond number of half-pound packets of sodium thiosulphate. This salt is nearly tasteless and combines with all the available chlorine in about half its

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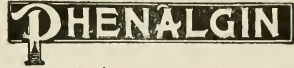
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weight of chlorinated lime. From these
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to one gallon of water and shake until
uniformly mixed.

4. Add one packet of thiosulphate to
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solved.

A gallon of solution No. 3 will steri-
lize 8000 gallons of any ordinary clear
well or river water in fifteen minutes,
and if at the expiration of that time the
one gallon of thiosulphate solution No.

4 be added to the water any excess of chlorine will be eliminated.

In encampments the water would require to be sterilized in the water-carts, and these apparently vary in size from 100 to 150 gallons. As one gallon of the chlorine solution is sufficient under ordinary circumstances for purifying 8000 gallons, one fluid ounce would suffice for 50 gallons. This being remembered, the quantity to be added to the contents of a water-cart could be calculated instantly by any man in charge who knew the capacity of the tank. The procedure would be as follows: Fill the tank with water, filtered if necessary and possible and add 1 ounce of the chlorine solution for every 50 gallons; mix well and allow to stand for fifteen minutes, then add a corresponding quantity of the soda solution and again mix. The water is then ready for use. With a very four or turbid water the writer would prefer to use a reagent ascertaining whether there was an excess of chlorine present or not, and for this purpose the soloids of Messrs. Burroughs, Wellcome & Co. are indispensable. The writer has just tried some of these, which have been in his possession for years, and finds them as delicate as when first prepared. They would be used in the following manner:

After adding the chlorine solution and mixing the water, pour a little into a cup at the bottom of which is one of the soloids. If there is an excess of chlorine present the water will become instantly distinctly blue. Repeat the test later, and if the chlorine has disappeared add a second dose of the chlorine solution, and so on until free chlorine can be detected in the water at the end of fifteen minutes. At the expiration of this period add to each 50 gallons of water 1 ounce of the soda solution, and after mixing the water will be ready for use.

It will be observed that the writer's suggestion differs from that of his friend Professor Woodhead, inasmuch as he uses the minimum amount of chlorine and takes no step to remove and possible excess, whilst the writer strongly advocates the use of an excess of chlorine and the removal of this excess after it has exerted its purifying action. The writer's process is the safer and almost certainly more simple for carrying out in the field.

Possibly the word "sterilization" should not be used in connection with chlorine treatment, as many bacteria, especially in dirty waters, are not destroyed, but the process can be depended

upon to remove any typhoid or cholera organisms which may be present in a water, and the same applies to the species of bacilli which are the probable causes of dysentery.

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ad 7-15

Auto-Intoxication.

Sir Andrew Clark called attention to and laid great stress upon auto-intoxication, as an important, but frequently unsuspected cause of disease. At the present time the important role it plays is more generally recognized. Successful treatment involves not merely a single flushing of the alimentary tract, but an elimination of toxins already absorbed. Goutiness, also the common hepatic and biliary disorders, are in most cases merely the cumulative effects of intestinal auto-intoxication.

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ad 7-15

The Recovery From Typhoid.

In spite of the improvements in general sanitation, typhoid fever still continues to exist, and is especially prevalent during the fall and early winter months. It is more than probable that most cases occurring in the larger cities are the results of infections contracted at the summer vacation resorts, where the water and food supplies are not as carefully safe-guarded as in urban communities. Although many forms of treatment, designed to abort or cut short the disease, have been advocated from time to time, it is indeed doubtful whether such regulation of the infection has ever been accomplished. As the average course of Typhoid is from four to six weeks, it is scarcely to be wondered at that the patient usually emerges from the attack in a generally devitalized condition. This is accounted for not only by the general toxemia incident to the bacillary infection, but also because the practically exclusive milk diet generally adopted deprives the patient of the natural food iron which ordinarily maintains the ferric sufficiency of the blood. Some degree of anemia is therefore almost always in evidence when convalescence is first established. The quickest and safest way to overcome this blood deficiency and to hasten revitalization and a return to the normal, is to give Pepto-Mangan (Gude) regularly and in full dosage. This thoroughly agreeable and acceptable hematic tonic is particularly serviceable in typhoid convalescence, because it does not irritate or disturb the digestion, nor induce constipation.

ad 7-15

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tations and appendicitis to the superficial operations in minor surgery.

Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying result that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastrointestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

Alcresta Ipecac in Amebic Dysentery and Pyorrhea.

For many years ipecac has been held by most practitioners to be the remedy par excellence in amebic dysentery. It has repeatedly fallen into disrepute due solely to its intensely nauseating properties. Many expedients to surmount the obstacles in giving the drug have been tried; however, it was not until Alcresta Ipecac, Lilly, was discovered that a combination of the alkaloids of ipecac for oral administration was possible.

Alcresta, a form of hydrated aluminum silicate which is insoluble, when added to a neutral or faintly acid solution of alkaloidal salts will immediately absorb the latter and carry them down with the precipitate. The alkaloids can then be released only in the presence of alkalis. This precipitate is Alcresta Ipecac which is supplied in tablet form, each tablet containing the active principles of 10 grains of Ipecac, U. S. P. These tablets pass through the mouth and stomach without liberating the alkaloids, but as soon as the alkaline secretions of the intestines come in contact with Alcresta Ipecac, the alkaloids are liberated.

The well-known researches of Vedder and Rogers have proven the specificity of ipecac in amebiasis; and Alcresta Ipecac, Lilly, overcomes the difficulty surrounding the oral administration of the drug in this disease.

Bass and Johns of New Orleans were the first to advocate Alcresta Ipecac in

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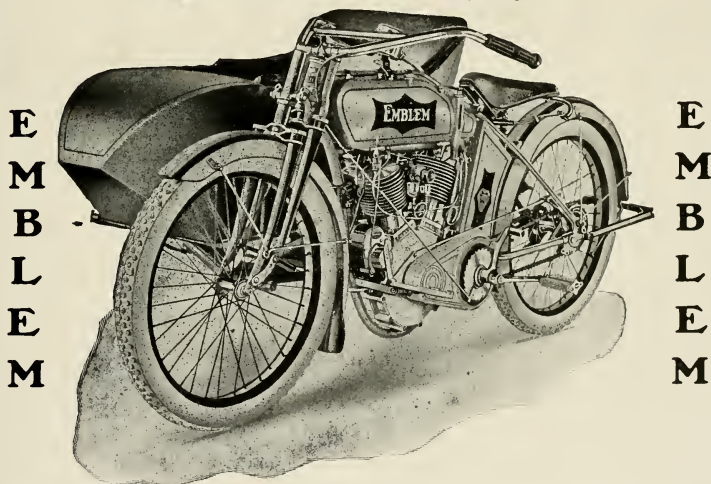
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the treatment of Pyorrhea Alveolaris, shortly after the announcement of Barrett and Smith that a protozoan—*Endamebas Buccalis*, and perhaps other species of endamebae, was the causative agent in this extremely prevalent malady.

Thus Alcresta Ipecac has come into widespread use by both physicians and dentists everywhere and since it has been clearly demonstrated that pyorrhea is frequently the underlying cause of many other systemic disorders and that, according to good authority, fully 95 per cent. of the adults over thirty years of age have pyorrhea, it will readily be seen that the possibilities of this new compound are very great. ad-7-15

Treatment of Persistent Inaccessible Hemorrhage.

Every physician feels the need occasionally of a reliable agent in persistent hemorrhage that is inaccessible to the ordinary modes of treatment. Coagulose meets that want—meets it better, it is believed, than any agent hitherto employed for the control of hemorrhage due to defective coagulation of the blood. Coagulose is prepared in the biological laboratories of Parke, Davis & Co., from normal horse serum. It is administered hypodermatically (subcutaneously).

The directions for preparing Coagulose for use are as follows: Add to the powder in the bulb 6 to 8 Cc. of sterile water, the temperature of which should not be above 98 degrees F. Introduce the water into the bulb through the needle of a 5-Cc. syringe. The rubber stopper should then be replaced and the bulb immediately shaken, continuing the agitation three or four minutes or until the powder is completely dissolved.

To fill the syringe, invert the bulb and remove the rubber stopper from its mouth. Insert the needle of the syringe into the solution in the inverted bulb and draw the fluid into the syringe.

By inverting the bulb before inserting the needle, one avoids the likelihood of drawing the foam or bubbles (caused by agitating the liquid in the bulb) into the syringe, as the foam will rise to the top of the solution, leaving the field for the insertion of the needle perfectly clear.

ad-7-15

The Selection of an Alternative.

The value of the class of remedies usually described as alternatives, is unquestioned, and the main point involved is the selection of one. The facts to be taken under consideration in disposing

of this point are degree of therapeutic effectiveness and palatability. The qualities of the ideal alternative are combined in IODIA (Battle) in large measure, for which reason it has acquired a favorable reputation in late syphilis, rheumatism and other states indicating the use of alternative drugs. ad-7-15

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functioned ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation. ad-7-15

The Arrest of Tuberculosis.

Great interest has been aroused recently among medical men by the reports of the splendid results being obtained in the treatment of tuberculosis, even in the later stages, by so-called "intensive use of iodine." Thus far the great bulk of this work has been done abroad, but for some time in this country quite a good many practitioners have also been applying this line of treatment with results no less striking and positive.

As a matter of fact, much impetus has been given to the proposition in the United States by the availability of Burham's Soluble Iodine, an iodine preparation that is especially adapted to meet the requirements of the "intensive method." These requirements are essentially (1) the use of large doses, (2) for long periods and (3) without toxic

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or harmful effect. Many and various were the iodine salts and products tested, but all proved disappointing in one way or another with the exception of Burnham's Soluble Iodine. Careful conservative trials showed that this preparation was indeed soluble, that it was free from the irritating action of other iodine products, and could be given in exceptionally large doses without disturbing the digestion or producing toxic effect. It was evident, therefore, that Burnham's Soluble Iodine, by virtue of its rapid and uniform absorption and that freedom from toxicity, could be administered in a dosage never before possible with the ordinary iodine compounds. As a consequence, the clinician has been able to use this preparation in tuberculosis in quantities that assured the full physiologic effects of iodine with a pronounced counteraction of the toxins, an activation of the nutritional processes, an increase in the elimination of waste products, and a marked stimulation of phagocytosis. Boudreau claims that the intensive iodine treatment has a profound stimulating influence on all of the internal secretions, a result that is in effect an indirect, or auto organotherapy. The action of Burnham's Soluble Iodine on all glandular functions and the marked impetus given to bodily metabolism would seem to substantiate this conclusion.

For the first few days after beginning the use of Burnham's Soluble Iodine there is little or no appreciable effect; in fact, there may be a slight increase in certain symptoms due to the reactions set up, and the initial stimulation of elimination. In a few days, however, the beneficial effects of the treatment appear, the temperature drops perceptibly, the cough decreases, and sputum steadily becomes more mucous and rapidly diminishes in amount. The night sweats grow less, insomnia is relieved, and the other symptoms show corresponding im-

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provement. The appetite soon increases, the digestion improves and a progressive gain in weight is noted. Gradually the physical signs show a change for the better and the patient's whole condition is substantially improved.

In conclusion, it can be stated without exaggeration that no remedy being used today in the treatment of tuberculosis holds such remarkable possibilities as Burnham's Soluble Iodine. The whole situation may be summed up in the statement that just as iodine is the logical remedy for all tuberculosis conditions, so is Burnham's Soluble Iodine the logical form in which to administer it.

A valuable little treatise recently prepared on "The Arrest of Tuberculosis" gives very explicit advice concerning the successful application of the "intensive iodine treatment of tuberculosis." Sent free to physicians on request. Address Burham Soluble Iodine Co., Auburn-dale, Mass. ad 7-15

Sander's Eucalyptol.

Sander's Eucalyptol is characterised by Mr. De Bavay, the eminent analytical chemist of Melbourne, as comparing with the commercial eucalyptus products as well refined and matured brandy compares with raw spirit. Not only does the primary distillation from the selected leaves of the best species give it a unique position, but the fact of it containing a large amount of eudesmol-peroxide imparts to it a superior antiseptic efficiency and freedom from irritant effects. It has great antipruritic power, and wherever there is inflamed skin which causes intolerable itching, as in pruritus ani or vulvae, eczema, simple and contagious impetigo, etc., the following will be of great service:—R. Acidi Carbolici, 15 grs.; Sander's Eucalyptol, 30m; Ung. Zinci Oxidi 1 oz. As soon as the state of the skin permits painting with the pure Sander Eucalyptol will cause rapid improvement especially in all chronic skin affections. In the troublesome facial eczema of infants from 20 to 60m of Sander's Eucalyptol should be added to the ounce of boracic ointment and applied. Astonishing results have also followed the application of the pure Sander Eucalyptol to inflamed gums and intractable ulcers.

There are now on the market a number

of crude oils of eucalyptus which contain the woody resinous extracts of the various species from which they are distilled and which lack the most preliminary refinement. They are generally bought from the crude distillers by trading concerns who are ignorant of what they contain, and are frequently pushed under coined names. It is therefore essential to specify Sander's Eucalyptol if the physician desires to safeguard his reputation and to benefit his patient.

ad 7-15

Cod Liver Oil For Children.

There are few remedial agents which operate with such marked beneficial effects as cod liver oil in the debilitated states of children, but so far as the crude oil, is concerned its unpalatable nature makes it quite impossible of continued use in these little patients. For this reason a cod liver oil product that is not only palatable but which may be continued for a considerable length of time becomes all the more desirable. Such an agent is to be found in Cord. Ext. 01. Morrhuæ Comp. (Hagee), in which are combined the active therapeutic principles of the oil without its obnoxious properties.

ad 7-15

Glyco-Thymoline For Colon Flushing.

Inactivity of the colon with its retention of fecal matter and consequent distention and interference with the work of the rectum is a prime factor in the causation of hemorrhoids, constipation and in the event of septic matter in the feces, auto-infection.

The rapid elimination of all septic matter, and the promotion of an aseptic condition of the intestinal canal is within the province of Glyco-Thymoline. One pint of a ten per cent. solution at a temperature of 100 degrees introduced well into the colon will produce a quick evacuation without pain or discomfort. This followed by three or four ounces of a twenty-five per cent. solution at the same temperature, retained, will speedily restore to normal conditions by inducing exosmosis, relieving pain by its anesthetic property and promoting a general aseptic condition by its power of cleansing.

A Woman's Number.

The May issue of the Medical Review of Reviews is to be a Woman's Number. All the articles contributed will be from the pens of women physicians whose work has achieved national importance. With the growth of the feminist movement, the economic position of women has attracted universal attention. As medicine was practically the first profession open to women, it is only proper at this time to consider whether their entrance into the medical profession has been of benefit.

In order that women may present testimony by which they should be judged, it has been deemed advisable to give them an entire issue to present the evidence of the value of their accomplishments. In the laboratory, in the hospital, in institutions, at the bedside, and in public service, women physicians have performed a valuable function. As a tribute to their earnestness, enthusiasm, modesty, energy, perseverance, and scientific acumen, the May number of the Medical Review of Reviews will be dedicated to the women physicians of America.



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The next annual meeting of the North Carolina Medical Society will be held in Greensboro, N. C., on the third Tuesday of next June.

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Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and

finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient aets exactly what he prescribed, No "just as good" allowed.



DR. JOHN ROBINSON IRWIN, CHARLOTTE, N. C.

The Charlotte Medical Journal

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CHARLOTTE, N. C., JUNE 1915.

No. 6

DR. JOHN ROBINSON IRWIN.

Edited by Drs. D. W. and Ernest S. Bulluck,
Wilmington, N. C.

Dr. John Robinson Irwin, of Charlotte, North Carolina, a graduate of University of Maryland School of Medicine, class of 1877, specialist in gynecology and abdominal surgery, five years professor of gynecology and abdominal surgery in the North Carolina Medical College, has practiced medicine and surgery in North Carolina thirty-seven years, and has been identified, professionally and otherwise, with many public institutions and societies in the State.

Dr. Irwin is of Scotch-Irish descent and was born in Mecklenburg County, North Carolina, December 29, 1853, son of Batte and Mary (Robinson) Irwin, and a descendant of General Robert Irwin, who served in the Revolutionary War, a prominent North Carolina legislator and statesman and one of the signers of the Mecklenburg Declaration of Independence, May 20, 1775. On maternal side he is a descendant of Rev. John Robinson, D. D., an eloquent and eminent Presbyterian divine and educator.

He received his earlier literary education at the Johnson School for Boys, Mill Hill, North Carolina, Poplar Tent Academy and the Griffith School at Charlotte, and his higher education at Davidson College. In the Sophomore year at the latter institution he won the Declaimer's medal and in his Junior year was chosen a representative of the Philanthropic Literary Society, and delivered an oration at the commencement exercises of that year.

He studied medicine two years under a preceptor, Dr. J. McKnitt Henderson and in 1875 matriculated at University of Maryland School of Medicine, graduating Doctor of Medicine in 1877. During one year he was clinical assistant at the University of Maryland Hospital, Baltimore. He has taken three post-graduate courses at the New York Polyclinic School of Medicine and Surgery, attended clinics at the Post-Graduate and other hospitals in New York City, Johns Hopkins Hospital, Baltimore, Mercy Hospital, Chicago, St. Mary's (Mayo's), Rochester, Minn.

For fifteen years he was engaged in active general practice at Croft, North Carolina. At the end of that period he re-

moved to Charlotte, and has since been a prominent factor in the social, professional and educational life of that city.

Dr. Irwin, in connection with Drs. C. A. Misenheimer, R. L. Gibbon and W. H. Wakefield, organized and established the Charlotte Private Hospital in 1896. This institution grew in popularity and patronage until 1902, when it was merged into the Presbyterian Hospital, now owned and controlled by the Presbyterian churches of Charlotte.

He became a part of the teaching force of the North Carolina Medical College in 1902, and for five years filled the faculty chair of gynecology and abdominal surgery. He has been president of the Presbyterian Hospital Training School for Nurses since its organization in 1903 and lecturer on gynecology and abdominal surgery. He was for several years a member and vice-president of the board of trustees of the Presbyterian College for Women, a member of the board of trustees of the Statesville Female College, trustee of Davidson College, member and elder of the Second Presbyterian Church, Charlotte, and medical examiner for several large life insurance companies. He has been surgeon to the Mecklenburg Riflemen, Queen City Guards, and surgeon to the T. P. A. of the State of North Carolina. He is the author of several papers, especially relating to diseases of women and abdominal surgery. Dr. Irwin is a member and ex-president of the Mecklenburg County Medical Society, member of the Seventh District Medical Society, Medical Society of the State of North Carolina, Tri-State Medical Society (Va., N. C., and S. C.), Southern Surgical Association, and American Medical Association.

Dr. Irwin is possibly one of the most accomplished and logical debaters in the medical profession of this State. His style is very attractive and his personality is remarkably fine. There is no finer character than Dr. Irwin. He has a large and commanding presence, a distinguished air and polished manner. One year ago at the Raleigh meeting of the North Carolina Medical Society he delivered the annual address and it was declared to be one of the best that has ever been delivered before that body of physicians.

Dr. Irwin has always been regarded as one of the leaders in the medical profes-

sion of this State. He enjoys possibly the largest and most select general practice of any physician in his city. He is well informed on medical and surgical subjects and is a great student of medical literature and a great reader of the classics. He was the first physician who subscribed to the Charlotte Medical Journal and has received a copy of each edition of it for over twenty-five years.

Dr. Irwin married Miss Margaret Henrietta Henderson, daughter of Dr. J. McKnitt Henderson, who shares with him the responsibility of his success.

CAUSE AND PREVENTION OF FEEBLE-MINDEDNESS.*

By C. Banks McNairy, M. D., Superintendent the Caswell Training School, Kinston, N. C.

In looking back through history from the very beginning of mankind, one is impressed with this fact that there has been a spirit of restlessness, uneasiness, anxiousness, coupled with expectancy or optimism. Each decade or generation has produced its astrologers, astronomers, scientists and theologians who are constantly striving, looking forward to and prophesying something new.

'Tis true, this spirit of optimism was often coupled with superstition and dread. Each generation often declaring some new discovery or theology, and oft-times are dogmatic enough to believe they have found the truth and the whole truth, and so declared only for the next decade or generation or two to make new discoveries, set forth new facts or doctrines with an equal amount of dogmatism, declaring that they alone have found the truth and proven all else a fallacy.

This applies more forcibly, we think, to religion and medicine especially. We of today know what rapid strides have been made along these lines, even in our day; how religion has broadened until now one is seldom found who is so narrow in his theology as to set up some special interpretation of the Scriptures, or theology that will embrace only the elect or selected few.

All recognize the new theology of today, the brotherhood of mankind which is the best religion that the world has known up to the present time, is embraced in the following: "Love God supremely, serve humanity, do business to pay expenses, and," as a Rabbi re-

marked in my office a few months since, "Save a little."

Religion of our day, we are glad to say, does not confine itself to beliefs and professions, but demands a service for humanity.

I presume there is no profession that has passed through more changes and has had more quacks and charlatans than the medical profession, and even a student of the present is bound to wonder why it is that that great enemy of mankind, Death, has not been arrested when from month to month and almost from day to day some good doctor, in his enthusiasm, announces to the world that he has just recently discovered a new method of diagnosis that is so plain and easily applied that "the wayfaring" man, though a fool, need not ere therein; or that he has discovered some remedy or method of treatment that all the ills of humanity readily succumb and surrender to its potent influence, only for time to often prove his mistake, and for disease, sickness and death to run rampant (unchecked) through the land.

It is not my purpose, in this paper, to announce any new discovery, or new theory, or new principle; it is only to emphasize one of the recognized fundamental principles governing humanity, almost, or entirely from the very first and it is that of hereditary transmission, and just merely to call your attention to a few facts as we see them bearing upon the "Cause and Prevention of Feeble-Mindedness."

Not until within the last one-hundred years, or less, has our profession given any special attention to, or has religion taken under her wings these undesirable members of society. They had neither been given medical treatment nor even had extended to them the milk of human kindness.

The world had almost universally adopted the Spartan theory, that they were objects of some special Divine visitation of which they themselves were wholly responsible, and that society alone was, or should be concerned, in any way whatever save that of their early dispatch, never for an instant thinking that they deserved any special attention whatever, much less trying to fathom the Cause and Prevention.

I think it is a conceded fact, by neurologists, alienists and psychologists, that the prime factors in the cause of feeble-mindedness and insanity are about as follows: Heredity 65 to 75 per cent., alcohol, syphilis, accident at birth, and

*Read before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

meningitis, making up the remaining 25 per cent. in the order named.

To prove that heredity has been recognized as a cause of physical and mental weakness, we will recite a few instances: When Israel, after being harrassed by being surrounded and overpowered by superior numbers, and the unwholesome influence of the Amorites and Philistines, and by intermarriage and social intercourse, and become contaminated and God wanted a man to begin the deliverance of His people, He recognized the influence of heredity upon the offspring by announcing to the mother of Samson that it was absolutely necessary that she abstain from alcoholic drinks and deny herself all social intercourse that would tend, in the least, to contaminate her in any sense of the word, and required the vow of the Nazarite to be made before He, the Great God of Creation, could make a physically strong man.

When He wanted a mental giant to go before His people and teach them and act as His spokesman, He required of Hannah, the mother of Samuel, the vow of the Nazarite for herself and son.

And when man had so shined that it was necessary that Godhead should be separated and one of the Trinity should be born of a woman and become man, sin excepted, God selected the pure innocent Virgin Mary.

I will merely mention just a few of the families that have contributed such enormous numbers of feeble-minded children to their posterity, feeling assured that their names are familiar to most of you gentlemen, as time forbids me to enumerate further.

The Kallikak Family, in which there are 80 mediocre children and 143 feeble-minded.

The Nani Family, in which there were 19 epileptics 24 insane, 15 in orphan's homes, 3 in homes for girls, 40 in state prisons; 90 per cent. of the males and 80 per cent of the females were alcoholics.

Licentiousness was the governing characteristic of 232 women, and 199 men.

A New England Family of 737 persons reported, there were 36 feeble-minded, 10 epileptics, 24 criminal tendencies, 8 prostitutes—alcoholism to a greater or less degree in all.

The Hucks Family, in which there were 112 matings; 12 were epileptics, 50 alcoholics, 52 sexually immoral, 56 sexually diseased, and 48 feeble-minded.

Gassell reports out of 230 persons,

there was found, in the family studied, 36 alcoholics, 22 insane and 3 epileptics.

The Jukes Family, of 1200 individuals, 288 were paupers, 144 criminals, 60 habitual thieves, 50 prostitutes, and 7 murderers.

The number of years in the poorhouse for this family was 2,300.

The cost to the state, estimated, was \$1,308,000.00.

Morality and intelligence has passed down by heredity, Goddard says, as shown by the Adams' and Edwards' Families, where we see a superior intelligence handed down to the sixth generation.

Death itself is the first and strongest proof of heredity.

Man is born to die. The determiners stamped upon the protoplasm, transmitted by heredity from our forefathers make the escape inevitable.

Botanists, florists, and scientific stock-raisers have proven beyond a doubt to the thinking minds, that heredity is transmissible.

To the Doubting Thomas, I will say, if such is not the case, then why not sow cabbage seed for sweet corn, and buy donkeys for milk cows? And if it is all environment, then when we want an Irish pointer, why not breed greyhounds, or when we want a setter, bull dogs?

I feel quite sure that the medical profession, as a whole, needs no proof of the fact that syphilis and alcohol, in a great majority of cases of insanity and feeble-mindedness, are the exciting causes, if not the prime.

You will admit that syphilis is transmissible. (What physician hasn't proven this by his own observation?) And you will further admit that alcohol effects the nervous and physical organism, thereby, leaves a very unfavorable impression or changes the determiners that govern the protoplasm and thereby transmits to posterity a blighted, retarded, or imperfect resistance, to say the least.

The following handed me by my friends, Drs. D. W. and Ernest Bulluck, of Wilmington, shows very forcibly the effects of alcohol upon the children whose fathers make use of it in the following ratio:

Of 219 children of occasional drinkers, 2.3 per cent. are defective; of 330 children of regular moderate drinkers, 4.6 per cent. are defectives; of 67 children of regular heavy drinkers, 9 per cent. are defectives; of 53 children of drunkards, 19 per cent. are defectives.

The fourth cause is usually expressed as accident at, or during birth.

We have in our institution, now, a boy in which there is no hereditary taint whatever, and whose family history is clear. It would have been a thousand times better had he died or had never been born than to be left in the condition he is now. All due to the use of forceps. He has been trephined and quite a large piece of the skull removed. So far, we have seen very little, if any, improvement, but cling to the hope that yet his brain may develop and his mind become clear.

Gentlemen, in my mind, we doctors, I mean those of us who practice obstetrics, it is yet a question, after a practice of nearly a quarter of a century, whether forceps have not caused directly or indirectly more deaths and more suffering due as a result of them not being properly handled, both to the mother and child, than has ever been saved by their use.

If there is one doctor that is to be dreaded, he is the all-round specialist who makes from forty to fifty calls a day and attends one or more cases of confinement during the same time, ever ready with the use of instruments and drugs, and in whose skilled hands, (a fact he never fails to tell), they have never done any harm, and the truth of it is, there are few so skilled in the art as he.

You who have not been so unfortunate as to meet him, I am quite sure have often heard of him. Yet statistics will prove he is a much less expert and that he has many more fatalities than he admits. God alone knows the results in the way of sepsis and death to the mother and child, also insanity and feeble-mindedness due directly to the ever busy and overconfident medical attendant. He is warped in mind, has an unskilled hand and is always ready with drug and instrument when time alone is all the help he should have (in most cases.)

My observation in maternity hospitals and in practice has thoroughly convinced me that there are as yet but few experts in the use of obstetrical forceps, and I believe you gentlemen, you older men at least, will agree with me all in all, that mother Time is the best obstetrician the world has ever known, and that feeble-mindedness, due to this or accident at birth should not occur, especially if a physician is in charge.

The last cause, meningitis, as far as I know, is one of those unavoidable con-

ditions of which humanity is the sufferer.

For many reasons I feel certain that the time has come when the thinking people of this day should bestir themselves and look about and see, owing to the ever increasing number that is constantly multiplying as the days go by, this undesirable class of human beings, the insane and feeble-minded, at least, to be longing and waiting for an opportunity to present itself; and the ways and means available, looking toward, as far as possible the prevention of the ever-increasing numbers.

The following ways we think offer a solution to this, society's greatest problem, because of the fact of their presence and their rapid propagation and dissemination throughout society and effecting society from every standpoint, socially, politically, financially and religiously. Segregate the girls, the higher grades especially; sterilize the lower grades, (the hopeless and helpless.)

We can't Oslerize them. In many instances, it seems it would be the most humanitarian act. Would to God we were permitted to do so, but society, religion and the Commandments of the Good Father who says, "Thou shalt not kill" forbids.

The next is to educate, through the medical profession and in our public schools and colleges, the young women and men along the lines of eugenics.

Notwithstanding that some of our leading theologians of today say, "There is nothing in eugenics," and advocate in a spirit, but not in words, "To Hades with it." I don't think that there are any of us who would argue for a minute that these nervous and mental diseases are not the results of sin, either directly or indirectly, and to illustrate my point, I call your attention to the following facts: Here is a man who has sinned; here is a woman who has been over-persuaded to sin, the result of their sin is a mulatto. We all believe there is a hope held out and that the vilest sinner may return and this man and this woman may repent and be forgiven, and in Scriptural language, have their sins washed away and their souls made white as the snow by the shed blood of the Man of Gallilee, who poured it forth for the healing of all nations. But, has the world ever known, or does it know today a religion that is broad enough and forceful enough to prevent or change the products of the sin of this man and woman the color of this mulatto?

And I ask again, "Has science or re-

ligion discovered, or do they know of anything under Heaven that will prevent like from producing like, or this mulatto from handing down through heredity both physically and mentally the results of the sins of the fathers?

No, I say the world knows no religion broad enough or powerful enough to prevent the children from suffering mentally and physically as the consequence of the sins of the fathers.

Quoting from the Rev. Dr. Herman of Lancaster, Pa., in which he says, "It is a sober scientific fact that we are beginning to see, with startling clearness, what the inspired writer proclaimed years ago, that the sins of the parents are visited upon the children.

Heredity is the Divinely made channel through which good and evil, virtue and vice, fitness for life, and unfitness, pass on from ancestors to their descendants.

Both the making and the marring of a man begin long before he is born.

Eugenics may be wrong in theory and impossible in practice, but it serves one good end in emphasizing the right of every child to be well born, and the duty of all parents to be fit for parenthood."

We also emphasize in these words, "The modern crusade against strong drinks that it is receiving increasing attention, viz., the effects of alcohol upon unborn children, that the sins of the drunken parents are visited upon their offspring in the form of physical, mental, and moral deficiency.

Thus the verdict of modern science induces and charges the fathers and mothers of our race with the solemn duty of safeguarding the birth right of their progeny to a fair start and a square chance in life.

We must educate our young men to remember the divine command, "Remember now thy Creator in the days of thy youth while the evil days come not, nor the years draw nigh, when thou shalt say, I have no pleasure in them," and that the second great object in life should be to know thyself physically and mentally, and they should know the hereditary weaknesses possessed by each individual, and the truth and facts as to the results of the mating of persons who have stamped upon their protoplasm such transmissible determiners that will, if mated with such other definite persons possessing determiners of insanity, feeble-mindedness, alcoholism and syphilis, of a certainty will wreck all their hope of a beautiful, loving and lovable, intelligent and intellectual posterity.

Impress upon our young men that they must be as clean, virtuous pure as the object of their love; that there should be nothing more sacred and desirable than to hand down the sacred torch of heredity untarnished to the generations unborn.

And further, that if the human family of which it is sad to state, we have no thoroughbreds today, but all the mongrels are permitted by society and law to run at large and disseminate their kind as numberless as the stars, without any regard for future generations, they must be clean mentally and physically.

Young women must be taught that it is absolutely necessary, before giving her life in mating to man that she may have a happy life and desirable posterity that she finds in the man of her choice those fundamental principles of christian character, both mentally and physically, that she wishes to see in her own boy and visa versa, the same must be taught the young man, that he must see in the wife those same beautiful traits and characteristics of womanhood, virtue and christianity, coupled with an uncontaminated heredity that he would wish to see in his own sweet beautiful, lovable and loving daughter. The time has come in our social life when men and women, in mating, must first consider their posterity and that no parents, guardians, societies, church organizations, or financial or political influences shall be considered that have not for their purpose the betterment of mankind and a virtuous, pure mental and physically strong posterity.

I have no sympathy for the one meeting their affinity that marriages are made in Heaven of lottery or chance, or at sight.

'Tis true, I believe that when God said to Abraham, "Increase, multiply and replenish the earth," that He meant that we should use all our intelligence and ask for Divine guidance and approval and not be governed by the animal and the lusts of the flesh nor the desire for social, political, financial or professional gain, but to look well to future posterity.

In conclusion, I beg to say that the time has come when, if we cannot teach people who to marry to protect society from the ever increasing hoards of insanity and feeble-mindedness, we must prevent, as many of the states have already done, by law, the marrying of those whom we know will naturally bring a posterity of mental and physical weaklings, help-

less and worthless, embarrassing, nerve racking, and whose care will of a necessity, become burdensome, to say the least.

NEEDED IMPROVEMENTS IN VITAL STATISTICS.*

By Dr. Carl V. Reynolds, Asheville, N. C.

A collection of facts respecting births, deaths, marriages, longevity, domestic economy, general resources, etc., when arranged in a classified and complete manner, is of fundamental importance, if accurate in the true origin of disease and cause of death. A tabulation of numerical facts, constructed and arranged as an intelligent whole for consideration, has done and is doing much to clarify many long disputed and puzzling questions. This is the foundation of life insurance, and causes the rise and fall in its market price to the policy seeker; yet both the insured and insurer are benefited thereby. The accurate gathering of statistics is a demonstration of the law of supply and demand in political economy.

The collection of vital statistics of all towns and cities, to be computed at State headquarters, thence forwarded to Washington for further compilation and report, as a whole, does good in the way of general information from which many important facts are gathered. The value of the registration of deaths and causes of death surely cannot be under-estimated, for which this evidence, preventable causes of death may be sought, thereby determining wherein failure has occurred, as compared with statistics of others. All standards are improved by comparison. In this way our method may prove a success or failure as compared to the success or failure of others.

The gathering of statistics is not preventative medicine. It does not eradicate disease. It is only a compilation of facts relating to the prevalence of disease, and is useless in the highest object to be obtained, unless it is used to locate, prevent and eradicate the source of the disease.

Transferable Deaths.

In the report of the Registrar General of England and Wales in 1911, out of a total number of 527,810 deaths in England and Wales, there were 40,000 transferable deaths. If these deaths had not been transferred, it would have meant forty thousand mistakes, and, should these deaths have been preventable deaths, and reported as such, and report-

ed to the Registrar, in the area in which the disease originated, forty thousand mistakes could have been remedied and possibly many times forty thousand lives saved, which would otherwise, in all probability, be maimed or lost.

Health Boards, working for the preservation of health and the prevention of disease, thereby increasing longevity, are rendering a true, beneficial, and far-reaching service to their fellow man. Nothing is more important than the conservation of human life, but to accomplish best results, each municipality must be given the responsibility of its own mortality statistics, contagion, communicable and preventable diseases, and must not be forced (as is done under the present method) to accept and to be accountable for the imported cases. Each city which carries on an accurate statistical bureau should be entitled to an individual record and should insist upon its rights. Certainly one of the main objects of vital statistics is in locating the source of disease and in preventing its recurrence.

This being admitted, how can it better be done than in giving the towns in which the disease originated the responsibility for having been the source of the disease, and, in the event of death, the cause of death? Is not this our object? Or is it simply a compilation of figures for the business world? I take it that we would be our brother's benefactor, to report to him wherein he has failed and, by comparative statistics, show him how to avoid in the future the errors of the past. What good can we hope to accomplish in having the statistics of others, equal—yes, better, than ours—by carrying their mistakes? To apply all means at our hand to locate places where preventable diseases find their fertility is our first duty.

Value of Vital Statistics.

We often hear in the appeal for vital statistics, reference made to its being simply good book-keeping of humanity, which is essential to the welfare and success of any business. This is true, but is it not well to bear in mind that beautiful and accurate book-keeping alone does not mean success? It requires a good business conducted on sound principles, along with accurate book-keeping to attain greatest success. Any business, firm, or corporation, through its system of book-keeping, learns, through the first year's business, wherein they have erred and, should the error be found in carrying faulty foreign accounts, do you suppose for one moment that the firm would

*Read before the Tri-State Medical Association of the Carolinas and Virginia in Charleston, S. C., February 18, 1915.

continue these foreign accounts on their books as live assets? No!. Such methods would lead to liquidation or bankruptcy.

Just so may we attain a good system of book-keeping in gathering vital statistics, and gain accurate and general statistical information; but the business, *Prevention of Disease*, will suffer loss and we should consider liquidation, if an improvement is not made in the method. Twenty-four of the United States are carrying on this business today, and within these states there are municipalities spending vast sums of money, and altruistic men are giving their time and energies in an honest effort to render real service to their country, only to find, by this faulty system of book-keeping and poor business method, their efforts lost, by being forced to carry as their own contagion, communicable, preventable, diseases and deaths, which should be carried by the towns in which they were contracted. What business house would take upon itself the burden of accruing the losses made by a similar business in other towns? It is just as ridiculous, it seems to me, in attempting to prevent disease and stimulate all towns to do their best, by the present method.

Time Limit.

It may be legitimate for political reasons to require one to live within a state two years before becoming a legal citizen; six months within the county; ninety days within the precinct to become a qualified voter. It may be practical to legislate a man into his legal rights as a citizen and, at the same time, he may by legislation be declared a non-resident; but by what means can the onset of tuberculosis be controlled or the individual relieved of its ravages in any specified time? By what process can one reconcile the time limit in cancer, tuberculosis, chronic cardiac troubles,—with that of pneumonia, diphtheria, scarlet fever, typhoid fever? Again it seems to me that the happiest solution would be in requiring a satisfactory proof of the source of the origin or the disease and classify it accordingly. Rapid advancement in the cause of preventive medicine can only be made by proving to The People, not indirectly as is now being done, but definitely and specifically, the value of preventive medicine. How could this be better accomplished than by eliminating from records All Imported Diseases, referring those to their proper places, thereby reducing one percentage column and raising that of the indifferent, careless, or non-progressive? No

obstacle will be thrown in the way when it is positively proven that without doubt it is our gain and our neighbor's loss. The Public will demand it. The City Fathers, Legislators and Statesmen in general will respond to the cause. Those towns having a high percentage column will be justly censured; a realization of unhealthy conditions will be brought home to them; and, as the first law of nature is self preservation, they will immediately set to work in an active crusade for the prevention of disease and the preservation of their people.

Preventive Medicine.

Preventive Medicine is the prevention of disease, but how can it be prevented if its existence is not known? How are we to know of our failures, if our good neighbors carry them for us and hide them in their own book-keeping, in the form of suspense accounts? We are groping in the dark. We are doing others an injustice. We are piling up our death rate. We are injuring health work. We are striking at the very heart of preventive medicine. Let us balance our books. See where we stand. Get out a new system, allowing the whole truth to prevail, and I believe that within five years many mistakes of the past will be corrected and many truths, now in the dark, will be unfolded.

The gathering of statistics from all towns, from the local Registrar, and sent to the State Registrar for compilation, and thence to Washington for further compilation and standardizing, is important for general commercial reasons, and, if the American people were fixed, this method would be satisfactory; but, to the contrary, they are transitory, constantly in search of better places—such as business centers, seaport towns, health resorts, and places for pleasure. Those places most frequented, are the greatest sufferers and should not, on account of their advantages, have to carry the disease and death rate coincident thereto. It is an injustice to the popularity of that town. It is misleading to climatic influences. It is a vital mistake in the prevention of disease. It is a false, yet innocent suppression of facts. Let us listen to a few statistical facts and I hope the results and conclusions gathered therefrom will cause you to realize the injustice being done to these cosmopolitan towns. The injustice to true and honest statistics. The injustice to prevention of diseases. The injustice and serious handicap to hygienic progress. The great hindrance to the eradication

of disease as well as to the encouragement of promotion and stimulation of the prevention of preventable disease.

Asheville's Death Rate (Exclusive of Still Born) Standardized and Compared With U. S. Census. All Causes.

Total	24.0 in	1,000
Average for U. S. (Census 1912)	14.1 in	1,000
Residents	16.4 in	1,000
White	13.3 in	1,000
Colored	25.6 in	1,000

Tuberculosis

Total	590.0 in	100,000
Average for U. S.	158.0 in	100,000
Residents (white and colored)	70.0 in	100,000
Local, White	13.0 in	100,000
Local, Colored	240.0 in	100,000

Seven Registration Cities of N. C.

(U. S. Census, 1911)

Total	278.0 in	100,000
White	223.0 in	100,000
Colored	364.00 in	100,000

Death Rate of Typhoid, Diphtheria, Pneumonia. (Standardized and Compared With the United States Census of 1912.)

Typhoid.

	Population.	
United States	16.5 in	100,000
7 Registration Cities in N. C.	64.0 in	100,000
(Charlotte, Durham, Winston, Greensboro, Wilmington, Raleigh, Asheville)		
Asheville, total (5 deaths)	25.0 in	100,000
Non-resident (4 deaths)		
Resident (1 death)	5.0 in	100,000
Resident, Colored	20.0 in	100,000
(Population 5,000)		
Resident, White	0.0 in	100,000
(Population 15,000)		

Diphtheria.

United States	18.2 in	100,000
7 Registered Cities of N. C.	22.0 in	100,000
Asheville, total (5 deaths)	25.0 in	100,000
Residents (4 deaths)	20.0 in	100,000
White (2 deaths)	13.3 in	100,000
Colored (2 deaths)	40.0 in	100,000

Pneumonia

United States	132.2 in	100,000
7 Registered Cities of N. C.	225.0 in	100,000
Asheville (60 deaths)	320.0 in	100,000
White (40 deaths)	273.0 in	100,000
Colored (20 deaths)	480.0 in	100,000

Whooping Cough.

United States	11.5 in	100,000
7 Registered Cities in N. C.	21.3 in	100,000
Asheville	0.0 in	100,000

Measles.

United States	10.0 in	100,000
7 Registered Cities of N. C.	16.8 in	100,000
Asheville	00.0 in	100,000

Scarlet Fever.

United States	8.0 in	100,000
7 Registered Cities of N. C.	1.0 in	100,000
Asheville	0.0 in	100,000

Small Pox.

United States	3.0 in	100,000
7 Registered Cities of N. C.	1.0 in	100,000
Asheville	0.0 in	100,000

Morbidity. (Asheville, 1914)

Typhoid	23 Cases Reported
Diphtheria	70 Cases Reported
Scarlet Fever	16 Cases Reported
Measles	66 Cases Reported
Small Pox	63 Cases Reported

Death Rate From All Causes.

(U. S. Census of 1912. Asheville, 1914)

Los Angeles	14.7 in	1,000
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Denver	14.2 in	1,000
New York	14.5 in	1,000
Birmingham, 10 per cent. or more colored	17.4 in	1,000
Washington, D. C., 10 per cent. or more colored	18.3 in	1,000
Atlanta, 10 per cent. or more colored	18.0 in	1,000
New Orleans, 10 per cent. or more colored	20.1 in	1,000
Baltimore, 10 per cent. or more colored	18.2 in	1,000
Asheville, one-fourth population colored	24.0 in	1,000
Asheville, White 13.3 per cent.		

Death Rate of White and Colored Compared (All registration areas).

White	929.5 in	1,000 deaths
Colored	70.5 in	1,000 deaths
or		
White	92.95 in	100 deaths
Colored	7.05 in	100 deaths

Los Angeles.

White	94.7 in	100 deaths
Colored	5.3 in	100 deaths

Asheville.

White	73.4 in	100 deaths
Colored	26.6 in	100 deaths

The growth and accuracy of vital statistics depends upon the realization of its exact importance. What could better further its popularity than to allow each municipality its true record.

The laws of average play no part in preventive medicine, unless the average is gained by a definite effort to seek the cause and effect, together with a united determination to eradicate the cause and modify the effect.

It is indeed gratifying to know that a city has a low rate of communicable diseases and deaths, because of its cleanliness, pure water supply, good sewerage system and sanitary closets, incinerator, school inspection, vaccination, meat inspection, a laboratory for the detection of contagion—Milk counts etc. It may indeed be said that the death rate of the citizens of such a city is perceptibly lowered and that the lives of those visiting in her midst are greatly protected, but why should a city thus protected be forced, by the laws of general average, to carry a higher death rate than those cities less progressive? It is a sad commentary on preventive medicine and is a great injustice to the town so wronged.

Remedy.—Allow each municipality to be responsible for every communicable, contagious and preventable disease or death, which originated in her midst.

Upon satisfactory proof of any communicable, contagious, or preventable disease, originating elsewhere, that disease shall be returned and recorded in the registration area in which the disease originated.

All deaths occurring from imported dis-

eases shall, upon satisfactory proof be referred to the area in which it occurred.

All imported deaths, from non-registration areas, shall be compiled as such and reported to point of origin, also tabulated in the registration area in which death occurred, for general information.

All imported, contagious, communicable or preventable disease, from non-registration areas, shall be compiled as such, and reported to point of origin and tabulated as occurring in the registration area in which the disease occurred, for general information.

With all possible emphasis, it is desired that my listeners be impressed with the dire need of statistical reconstruction—not for the special benefit of the few, but for the good of the whole. Look not upon it with an impugning mind. Let us bend every effort toward a reformation, and accomplish much toward the prevention of preventable disease.

ACUTE APPENDICITIS—END RESULTS OF ONE HUNDRED CONSECUTIVE CASES OPERATED UPON.*

By G. Paul LaRoque, M. D., F. A. C. S., Surgeon to Memorial Hospital, Etc., Richmond, Va.

The purpose of this report has been expressed in a paper entitled "The Standardization of the Surgeon." The present is the first of a series of reports of the end results of the personal work of the writer. There will be other reports in the future.

The principles of diagnosis of acute appendicitis are fairly well standardized. It is not sufficient, however, merely to label the disease by name. The real diagnosis must recognize exact pathology, local, regional and remote, and discover coincident and complicating affections. To recognize the various types and stages of the disease and to recognize appendicitis in association with, coincident to, or complicated by other affections, is largely a problem of individual ability. Individual efficiency of diagnosis and treatment influence markedly the character of the products of the work of the surgeon, the ultimate result to the patient.

The principles of treatment of appendicitis are also definitely standardized and extremely simple. Standard principles

must be practiced upon the basis of rigid personal individualization. The best end results are secured through the successful adaptation of personal treatment to personal pathology. Each act of intervention or postponement must be based on a definite sound reason and not veneered by excuse in the name of "personal equation." When symptoms are present the appendix should be removed. It is the exception that there should be any unnecessary delay in performing the operation for uncomplicated appendicitis and its sequelae. It is rarely wise to advise that the patient wait for an interval of complete subsidence of symptoms before performing the operation. The exceptions to the uniformly accepted principles of treatment of appendicitis are furnished only by two groups of circumstances referable to complications:

First, those advanced and neglected cases in which death is so imminent that any intervention seems likely to precipitate it, and even transmission to the hospital is contra-indicated.

Second, those cases in which there is appendicitis without peritonitis, but in which there also exists certain complicating affections such as violent bile tract infection, biliary, pancreatic or ureteral colic, acute tubal or ovarian inflammation.

Cases with a suspicion of one or the other of these reasons for delay demand the most certain diagnosis and technical judgment for their postponement; the responsibility for delay should not be assumed except after consulting with one of superior and uncolored judgment and with the patient under the strictest and continuous observation in the hospital ready to be operated upon at any minute should the necessity arise.

Under the circumstances referable to these two groups of cases, after rigid individualization of each patient, and earnest consultation with the family physician, we have advised the preparatory treatment of absolute rest to the patient and to peristalsis. This may sometimes be secured by withholding all food, the hypodermic administration of morphine, and above all, the rigid avoidance of cathartics. Sometimes local applications of heat or cold or tincture of iodine are made to the abdomen; sometimes the patient is kept in the trunk elevated position; sometimes water containing sodium chloride or carbonate is administered by bowel; sometimes large doses of hexamethylenamin are prescribed, sometimes other medicines are given; and

*Read by title before the recent Charleston meeting of the Tri-State Medical Association of the Carolinas and Virginia.

when bilious vomiting persists, the judicious use of the stomach tube and gastric lavage are followed by happy results.

To postpone or to perform the operation for appendicitis upon a basis of hours duration has seemed to us less rational than to act upon the pathology. The cases in this series have presented very different pathology after the same number of hours, and a large experience in the careful study of individual cases has convinced us that the type and severity of the individual case and its pre-operative management is more potent in determining the pathology in and about the appendix and other abdominal organs, than are hands of the clock or the calendar.

The classification of the disease by different surgeons presents the greatest lack of uniformity and we all have revised our working classifications from time to time. Comparison of end results would be facilitated by standardizing the classification of the disease.

The classification which harmonizes the etiology and progress of the disease and its pathology with its clinical signs and course and directs the treatment of the individual case, may be acceptable to most surgeons. The classification which we have adopted and upon which we apply standard principles of diagnosis and treatment, is as follows:

Acute Appendicitis.

1. The disease is confined to the appendix without peritonitis (pure appendicitis). 23 of this series of 100 cases were of this type.

2. The disease has extended to the peritoneum covering the appendix (appendicitis with local peritonitis). 47 of this series were of this type.

3. The disease has extended beyond the appendix to the peritoneum in the immediate region. These cases represent a slow or rapid rupture of the appendix in a small spot and are appendicitis with regional peritonitis. 18 of this series had abscess.

4. The disease has extended by sudden rupture of the appendix and the production of regional and spreading peritonitis with or without abscess. 12 cases of this series of 100 had diffuse peritonitis.

We have regarded each patient as seriously and as sacredly as if it had been the first we had ever operated upon and as if it would be the last; we have tried to feel that the result in each case would be the same to our statistics as to the patient; if one dies it is a mortality of

100 per cent. and if the cure is not complete the end result is just so much less than satisfactory. We have not attempted to originate practices nor to experiment with questionable and substandard procedures. Neither have we followed a fixed and definite and inflexible routine practice of details, for any large number or group of cases. On the contrary we have absolutely individualized the treatment of each patient and the details of the pre-operative, operative and post-operative treatment of each case, upon standard principles. There may be many cases of a given type but there are no two patients nor pathologic specimens exactly alike. Standardization of surgical practice must be based on individualization of the surgical patient and pathology, directed by standard principles, and guided in each separate, isolated, individual case by common, technical and surgical judgment, and by the most scrupulous painstaking care of the minutest details of the exact pathology, etiology and course of the main disease with due respect to the coincident, additional and complicating pathology, and the physiology, psychology and anatomy of the patient.

The product of our work as shown by final results, has been improved through painstaking care in the rigid individualization of each patient under treatment, a scrupulous technique, the greatest accuracy in the treatment of all details, the so-called "little things" in the management of each individual patient. We have never hurried rapidly. The gentlest and most accurate manipulations of tissues is practiced in the individual case and we exercise the most rigid personal scrutinization of the minutest details concerning the management of each before, during and throughout the entire period after operation. These practices have given us cause to believe that attention to such minutiae have improved the end results of our personal work.

I take this opportunity to thank those doctors who have so kindly referred the patients to me for operation. I am genuinely grateful to each and every one for their kindness and confidence. To those who live in Richmond and immediate vicinity and to those who came with the patients from a distance, I am especially grateful for the benefit received from consultation and advice with reference to the individual patient. My practice is limited to surgery and I have invariably requested that the patient's physician

when he is accessible, attend the patient during the time the surgical pathology is under my care, and exercise supervision of the patient's habits and general condition for several weeks afterward. The many "little" though in reality big and important matters of this kind, have contributed much to our satisfactory end results.

The details of the operative technique need not be described in this contribution. We have adopted the standards and employed the methods well known to operative surgeons and without special interest to practitioners of medicine. We have safe-guarded each patient against the pernicious effects of fear by exercise of kindness and by the practice of humane methods. The confidence in the surgeon which has been instilled into the patient by the attending physician, has made it easy to assure the patient that there is no grave danger in the operation. It has been of very distinct and practical value for us to meet the patients in the hospital upon their arrival, when possible to do so, and in all cases to see them at the earliest possible moment after they enter the hospital. We have invariably had them placed in their bed upon arrival and we are convinced that it is much better for the patient to become quiet, if necessary by the use of morphine, before they are taken into the operating room.

We rarely rush upon a patient. The pathology frequently calls urgently for prompt treatment, but we find great satisfaction in spending a little time in examination of and conversation with the patient. It entails no loss of time and requires considerably less anaesthetic if we thus calm and secure the co-operation of an excited patient. It has repeatedly proven of vital importance in making an exact diagnosis while the operating room team is setting the table. In some instances "emergency" cases will be more safely held for a while and repeatedly we have through this preliminary care and study, been able to choose a proper incision through which complicating and coincident pathology could be cured at one sitting.

The local and general preparation of patients for operation has undergone some change since the first few cases. Active purgation has been discontinued. All cathartics and enemas are rigidly avoided. Peristalsis should be totally pacified. If necessary morphine should be administered. By thus localizing pathology we may be less timid about

masking the symptoms. The importance of this is appreciated. About the most serious operation to which a patient, the victim of acute abdominal pain, may be subjected, is the operation of the bowels produced by the administration of cathartics. Since the pernicious practice of purgation in the presence of abdominal pain has been by most practitioners discontinued, the number of cases of peritonitis and abscess formation have diminished and the mortality of appendicitis nearly obliterated.

Of the 100 cases in this series, 68 of them were operated upon solely for acute appendicitis with and without peritonitis. The remaining 32 cases had other abdominal pathology which required operation in addition to the distinct pathology of appendicitis. The records fail to show whether or not in the individual case the complete pre-operative diagnosis of this pathology had been made. Whether or not the pre-operative diagnosis was made does not alter the fact that the patients were suffering with the disease and our failure to diagnose the complicating and co-incident pathology, represents substandard ability on the part of ourselves rather than the fault of the disease. We frankly admit that some of the cases in this group were not diagnosed completely before operation. I regret that I have not the exact records of this in each case before operation.

Many of the cases are of unusual interest, some of them presenting interesting and vital problems of surgical judgment, some of them were desperately ill. It would make the paper unjustifiably long to cite the details of each such case. The reader who is interested will be able to find them in the abstract of the records without difficulty. These are offered in the reprints.

The anaesthetic employed has been mostly plain straight ether preceded thirty minutes to an hour before operation, by a hypodermic injection of morphine and atropine. Nitrous oxide with oxygen with little or no ether has been and still is employed in some cases.

The actual operative technique has been performed in each case according to the well recognized methods applied to various types of the disease. We have followed standard practices, avoiding originating anything or experimenting with questionable procedures. The end results have been effective through our effort to practice to the very best of our ability in the individual case, things known to be proper. We direct special

attention to the careful placing of drainage tubes in those cases calling for drainage. The tube devised by Dr. W. L. Peple of this city, has been of great satisfaction. This tube does not become adherent, is easily removed, and replaced and I am convinced that through the employment of the Peple drain, more rapid healing of our abscess cases has been secured. It is rare that a sinus from an abscess case has persisted longer than two weeks since we began to employ Peple's drain, and I have the impression that when a sinus persists longer than three weeks it is kept up by something left.

We never leave a large hole in the abdominal cavity and when drainage is employed, we always bring the layers together as snugly as possible against the tube. If more than one tube is employed, we place sutures in the separate layers between the tubes. We think that a hernia is less likely to follow through two small holes than one large one.

Post-operative treatment in every drainage case has consisted in the use of those remedies which encourage physiologic rest and starvation except for water which is given abundantly by mouth when the patient will take it, by bowel if the stomach is non-retentive. As a rule when they have vomited once or twice a competent nurse can influence them to retain water by the mouth.

In cases of diffuse peritonitis we invariably place them with the shoulders elevated to Flower's position and the body turned to the right side. Water, saline or soda solution may be given by bowel. Morphine is given hypodermically in all cases where the pain is severe and in suppurative cases the bowels are splinted by liberal doses of this drug frequently repeated.

It is in these cases that we regard the resting and splinting treatment by withholding food and giving morphine, as life-saving in its effect. But we have employed it only as a preparation for operation and post-operative treatment for peritonitis as pointed out above in two groups of cases. It is in no sense regarded as a method of eliminating the necessity for operation or of postponing operation longer than is necessary to get the patient and pathology ready. We employ this in such cases not upon a basis of hours duration, but upon the pathology present. We have never permitted our treatment to be guided by the hands of the clock.

We have never been in a hurry to

move the bowels after operation nor to give the patient food. It has been a rare exception for us to have to employ the stomach tube though we have repeatedly encouraged the patients to vomit and given them large draughts of water for the purpose of washing out the contents of the stomach. When they begin to call for food the second, third, or fourth day, depending upon the severity of the case, we have gratified them, beginning with small quantities and cautiously increasing to toleration and gratification.

A drug cathartic followed if necessary by an enema is routinely administered at the end of the second or third day.

After the muscle splitting incisions which have been completely closed, patients are permitted to sit up in bed as soon as they feel inclined to do so, generally the second or third day. They get out of bed when they choose from the third to the seventh day depending upon the patient.

Of these 100 cases there were 68 muscle splitting incisions of which 43 were completely closed, and 25 had to be drained. Of those closed completely, 20 were kept in bed from 3 to 5 days, 16 from 5 to 7 days, 2 remained in bed 8 days and 5 were kept in bed from 10 to 14 days.

After mid-line and right rectus incisions we have been keeping them in bed usually two weeks. Cases in which drainage has been employed, are kept in bed until the sinus and wound in the peritoneum is healed. We are never in a hurry to remove the tubes and gauze; by permitting these to remain in sufficiently long, they easily slip out without pain or difficulty.

Of the mid-line and right rectus incisions and those cases in which inguinal hernia was also repaired, there were 32 cases. Of these 9 required drainage and the remaining 23 were closed completely. These were kept in bed from 11 to 21 days.

After making careful observations of several hundred of cases of healthy patients who sat up on the third to the fifth day following an easy appendectomy through a small muscle splitting incision in the extreme southeast corner of the abdomen, our surgical judgment convinces us that long confinement to bed is not necessary for wound healing. I seriously challenge the belief that any case of post-operative hernia has ever occurred as a result of a patient sitting up that would not have occurred as a result of vomiting, coughing, or sneezing

while in bed. Our own experience is that no hernia has developed and no ill effects have occurred after early rising. On the contrary case No. 111780 of this series, illustrates the fact that prolonged stay in bed gives no guarantee against the development of hernia. The fascia had not been completely brought together by the previous operator and through this the hernia had occurred. There have been many such cases observed by every active surgeon.

Many of the patients had been sick days, some weeks, and others only a few hours with the acute symptoms and pathology as recorded. Careful observations have convinced us that it is not practicable to estimate the pathology present upon a basis of duration of symptoms. Some of our worst cases had been acutely ill only a few hours, in some of our mildest, the acute symptoms had existed days.

We do feel that the treatment before operation has influenced the pathology. We confess that we have not sufficiently reliable nor numerous data to prove that the administration of purgatives has caused intensification of pathology, but our impression is very positive that purges play a prominent part in the production of peritonitis.

We have seen no harm come from transportation of the patient to the hospital, nor do we feel that the means of going to the hospital has affected the pathology. Some have walked in, many have gone in carriages, some in the ambulance, and a large number have come a distance on railroad trains. None of the patients nor their accompanying physicians have thought that the trip has hurt the pathology and indeed the hypodermic of morphine given just before leaving home or on the train, and the avoidance of food and drink and vomiting on the way, has prepared them nicely for operation and they all recovered.

Of the total 100 cases, 68 were in males and 32 in females. The most interesting feature in relation to the sex incidence of the disease in this group concerns the type of disease found in the two sexes. Thus of the 100 cases, 18 were regional abscesses and 12 were diffuse spreading peritonitis. 11 cases of abscess and 10 of spreading peritonitis occurred in males and 7 abscesses and 2 spreading peritonitis occurred in females.

Concerning the age incidence, we had only one patient under 10 years of age, 23 between 10 and 20, 42 between 20 and

30, 27 between 30 and 40, 4 between 40 and 50, 2 between 50 and 60, and 1 patient over 60.

Non-surgical complications previous to operation are not fully recorded. The records are not perfect. I have record of only one case of pyelitis, 2 cases of heart disease with lost compensation, in both these cases there was abscess. We have been fortunate in having patients who were good surgical risks apart from the surgical pathology. This may partially account for the fact of no mortality, and we are glad to acknowledge our thanks to all the patients for their vigorous vitality. Some were tough.

It may be appropriate to state some general impressions gained from making the study of this series and we would direct attention to certain unusually interesting cases.

Two cases, 7894 and 111628 were known to have right sided pleuritis and pneumonia before operation for appendiceal abscess. Prompt recovery of the chest condition followed immediately upon operation. Chloroform was administered to one and ether to the other. We often see cough disappear after the evacuation of pus either in the chest or abdomen.

It has been several years since we have had any difficulty in locating and removing the appendix in all abscess cases. In 5 of this series, 7894, 101435, 132033, we made no search for the appendix, merely drained the abscess and there have been no sequelae. In only one of these, 101483, did we have to perform the second operation. We are not sure that some other surgeon has not performed appendectomy of a stump in one or more of the cases which we merely drained.

In the patients upon whom we have operated for appendicitis of the stump left by the doctors who operated previously, 101489, 101608, in two, the first operation was performed for non-suppurative disease. The doctors who operated were not surgeons and failed to remove all the appendix. Case 121851 was of unusual interest. He had been operated upon three times for appendicitis and the appendix had never been touched.

The personal impression gained from 4 cases in which we had to excise a piece of omentum on account of the circumscribed abscess in the structure, 101438, 111629, 121748, 131980, is that we feel that it would have been unsafe to have failed to discover and remove this small collection of pus. They were very severe cases of appendicitis and their

convalescence was most satisfactory.

The two cases in which there was acute appendicitis in the presence of tuberculous disease of the bowels and peritoneum, were interesting.

Lane's bands, Jackson's veils and other such anomalies were not attracting much attention during the time of the early cases of this series. In only 7 cases were such anomalies recorded. One Meckel's Diverticulum was discovered, 101337.

One patient in this series, 131997, was five months pregnant upon the development of the acute attack; whether or not the "nausea of pregnancy" which was exhibited before the operation and which never appeared afterward, was due to pregnancy or disease of the appendix, leads to a thought which will bear further observation.

At the time of operation 4 patients in this series were known to have pelvic disease which caused symptoms, but in which, for one reason and another, the pelvic pathology was not operated upon. These women are still suffering with pelvic symptoms. I wish we had cured the pelvic pathology at the time of operation.

During the period covered by this group of 100 cases we have operated upon 2 people for acute appendicitis and found that the appendix was perfectly normal and had never been diseased.

A case out of town had all the symptoms of rapid progressive violent peritonitis which the doctor in whom I have great confidence, interpreted to be a rupture of the appendix. After bringing him 8 miles from the country we attempted to operate. As soon as the peritoneal cavity was opened, intestinal contents in large quantities became visible in the peritoneal cavity. The appendix was normal and the condition of the man was too desperately serious for us to make any search for intestinal perforation. I learned afterward that he had fever for 12 days previous to the onset of peritonitis.

The second error was another case incompletely studied. It was an emergency operation upon a negro boy referred by a doctor in whose diagnostic skill I have great faith. The boy's appendix was normal; he had tuberculosis of the small bowel with partial obstruction.

Following operation we have had no peritonitis, no kidney complications, no phlebitis, no pneumonia, no residual abscesses, no intestinal obstruction, no hemorrhages, no embolism, no thrombosis, no deaths.

Excessive fright has played only a small part in our cases. Their attending doctors have inspired confidence, the careful preliminary examination and avoidance of rush has caused each patient to believe we were taking every precaution for their good, the nurses have co-operated loyally and calmed many patients and after each operation and at frequent intervals during the immediate post-operative period, we have visited them and given them positive assurance that they were cured and in no danger. These frequent visits and repeated assurances during the first few hours following operation have been productive of such very definite and obvious good in every case, that we never permit ourselves to be too busy to neglect it.

Concerning post-operative hernia, we consider that every case that has to be drained has when taken off the table, a hole in the abdominal wall, namely a rupture. When the patients left the hospital, however, they had no protrusion of the abdominal contents. These if they occur at all, commonly develop after about three months. We have asked all our patients to inform us if they developed rupture and we have been informed by only two.

Briefly summarizing the final end results of this, the first 100 cases of appendicitis, we find the following:

Those who gave an unsatisfactory end result, were those in whom there was any complication of any kind whatever following operation. Of the total 100 cases 16 had this lack of perfect satisfaction.

They were as follows:—3 had acute dilatation of the stomach; 1 had excessive tympany without dilatation of the stomach; 3 had excessive vomiting and 1 of these had severe hicough; 2 had hematoma of the wound; 3 had fever called malaria, one of these and one other had retention of urine; 1 had post-operative hernia; 1 had bronchitis; 1 had fecal fistula; 1 had hematuria due to hexamethylenamin. In none was the convalescence long delayed, though the end result was, on account of post-operative trouble, not perfect.

84 patients gave satisfactory end results. Of these 56 were followed by end results which were called perfect. In these there was no complication of any kind, no excessive tympany, slight or no vomiting, no fever, only the normal amount of pain and the healing of the wound was perfect leaving a normal scar.

There were no funerals.

THE CLINICAL MANIFESTATIONS OF SYPHILIS OF THE NER- VOUS SYSTEM.

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The central nervous system considered anatomically consists of meninges, blood vessels and parenchyma, or brain substance proper. An infection of the central nervous system with the spirocheta pallida may affect simultaneously all three of these component parts, but usually the brunt of the injury falls predominantly upon one. It is therefore very convenient in discussing syphilitic lesions of the nervous system to consider them from the anatomical standpoint as falling into three groups, the meningeal, the vascular and the parenchymatous.

The recent renaissance in the study of syphilis, which was inaugurated by Schaudinn with the discovery of the causative agent and so brilliantly carried forward by Bordet and Gengou, Wasserman and Bruck, Ehrlich, Noguchi and many others, has achieved no greater result than the revival of optimistic interest in syphilis of the nervous system. Important facts have been acquired with such rapidity that a veritable regeneration of the subject has been accomplished. The discovery of the spirocheta pallida opened the way and furnished the stimulus for all subsequent advances, and the history of medicine scarcely furnishes a more striking example of the dependence of rational therapy upon exact pathological knowledge than the recent advances in the treatment of syphilis. Noguchi's brilliant researches have demonstrated conclusively, as no one can doubt who has studied his microscopic preparations, that general paresis is due to infection with the spirocheta pallida and the Wasserman reaction has left no room for doubt that tabes as well as general paresis may rationally be classified as forms of cerebro-spinal syphilis.

During the past two years I have had the opportunity of studying very thoroughly a large variety of syphilitic affections of the nervous system, with the aid of the newer laboratory methods, and in this communication I wish to review the subject using as illustrations selected cases which seem especially instructive.

In the secondary stage of syphilis the blood contains the spirochetæ in large numbers and they are thus carried to every part of the body. The question at once arises as to how frequently the nervous system shows evidence of infec-

tion in the early stages of the disease. The use of salvarsan first drew the serious attention of investigators to this question, and the use of salvarsan has been largely instrumental in answering it.

Finger (1) of Vienna reported in 1910 one hundred and seventy cases of syphilis treated with salvarsan, seven of which developed lesions of the optic or auditory nerves subsequent to the treatment. This, and similar reports which quickly followed, seemed to show that in certain cases salvarsan acted deleteriously upon the nervous system, and the new drug was regarded by many with distrust. Ehrlich (2), who as he himself expresses it, is like a man in a tower when attacked responded to these criticisms of salvarsan with alacrity and vigor. He maintained from the beginning that cranial nerve palsies following the use of salvarsan were not due to a toxic action of the drug but to a localized syphilitic meningitis developing from a latent focus of infection which had not been reached by the salvarsan. He regarded the cranial nerve lesions as evidence of a relapse of the disease and called the phenomenon "neurorecidiv". In favor of this view was the fact that the nerve lesions developed as a rule some time after the beginning of salvarsan treatment, differing in this way from the so-called "Herxheimer reaction" where a severe reaction in some part of the nervous system follows shortly after an injection of salvarsan, due it is believed to the rapid destruction of a focus of spirochetes with consequent liberation of toxic substances which produce a local reaction. Benario (3) in his monograph on neurorecidiv pointed out that cranial nerve lesions developing during the course of mercury treatment were not uncommon, and showed that the findings in the spinal fluid were exactly similar in neurorecidiv cases following mercury treatment to those following salvarsan: in both instances a large increase of lymphocytes, excess globulin and a positive Wasserman reaction were found in the spinal fluid.

Clinicians have very generally accepted Ehrlich's view of these nerve-relapses, and the incidence of this phenomenon in cases treated with salvarsan has ranged in various clinics from 0.5 to 3 per cent.

Thus in this indirect way it has been shown that latent foci of spirochetal infection in the meninges are not rare and the question as to when in the course of

syphilis the infection of the central nervous system takes place becomes of great importance. Is there evidence that the nervous system is invaded during the secondary stage of syphilis? Ravaut's (4) contribution to this question has probably aroused more discussion than any other. He examined the spinal fluid in 116 cases of secondary syphilis and found what he regarded as abnormalities in 67 per cent.

Subsequent workers have freely criticized these findings upon the grounds that the methods employed were not accurate enough and that the evidence of abnormality accepted by Ravaut were not sufficient.

Using more refined methods of cell counting and globulin determination and employing the Wasserman reaction, others however have shown that secondary syphilitic meningitis is not uncommon (5) These studies have proven that infection of the nervous system may occur very early after the primary lesion, and that it may remain latent causing none or only slight symptoms over long periods, flaring up later however either spontaneously or as the result of treatment.

The following case illustrates very beautifully syphilitic meningitis occurring early after the primary lesion.

A young man of 26 was brought by his father for examination owing to loss of speech which had developed suddenly 6 days previously.

Seven months before the patient had had a sore on the penis, and he was placed immediately by his physician upon anti-luetic treatment, receiving mercury pills for one month and two injections of salvarsan. No secondaries.

Six days ago speech became very thick and muddled and rapidly progressed to complete inability to speak intelligibly. For a month previous to this he had suffered with severe frontal headaches which were worse at night.

Physical examination showed the following positive findings: Speech was so impaired that it was difficult to persuade the patient to attempt to speak. There was no paralysis of the muscles of the tongue, lips or larynx. The speech inhibition seemed due to a central lesion—a motor aphasia. There was no evidence of sensory aphasia. There was anisocoria, the right pupil being larger than the left, but both responded actively to light and in accommodation. The cranial nerves were all quite normal and there was no

defect on the motor or sensory side. The reflexes, deep and superficial, were normal.

The Wasserman was positive in the blood and spinal fluid and the fluid contained 412 cells per ccm, of which 97 per cent. were lymphocytes and 3 per cent. polymorphonuclears: globulin was present in large excess.

An intravenous injection of 0.6 of a gram of old salvarsan was given and twenty-four hours later speech was remarkably restored. Under continued treatment with salvarsan and mercury the speech defect entirely disappeared. Within ten days the patient presented no physical signs of disease, but the Wasserman reaction was still positive in blood and spinal fluid and there were 180 lymphocytes to the cubic millimeter in the fluid. He returned home with explicit directions for continued treatment under his local physician.

The cranial nerves are frequently injured by the basilar meningitis of cerebro-spinal syphilis. The sixth and third nerves are particularly liable to injury and the consequent strabismus and diplopia constitute one of the most frequent complaints. Indeed, so often are the motor nerves to the eye involved in cerebro-spinal syphilis, including under this term tabes and general paresis, that the presence of an external or internal ophthalmoplegia should always awaken a strong suspicion of a syphilitic etiology.

The symptoms of cerebral syphilitic meningitis are those of increased intracranial tension plus the symptoms of local injury. Headache, with or without vomiting, and usually worse at night usually brings the patient to the physician. This may constitute his only complaint, but as a rule he complains of other symptoms due to the impaired function of one or several cranial nerves. Thus attacks of transitory amaurosis or bitemporal hemianopsia with strabismus and diplopia form a characteristic group of symptoms. Any other combination of cranial nerves may be involved and if one but remembers that the pathological basis of the symptoms is a more or less wide-spread syphilitic infiltration of the meninges of the base of the brain, the often curious manifestations of the disease are readily understood.

Especially characteristic of cerebro-spinal syphilis is the marked tendency to remissions. Symptoms of great severity may spontaneously disappear. So characteristic is this tendency toward a course of remission and relapse that it

is of great aid in diagnosis. The finding of typical or modified Argyll—Robertson pupils is not uncommon, and here, as in all other forms of syphilis of the central nervous system, is of the utmost value in diagnosis. Finally, and most important of all, are the findings in the blood and cerebro-spinal fluid. These I shall discuss in more detail later; it will suffice to point out that in syphilitic meningitis the cell and globulin content of the spinal fluid are high and the Wasserman usually positive in both blood and spinal fluid.

The following case illustrates very typically syphilitic meningeal infection with involvement of four cranial nerves.

The patient, a thin unhealthy looking married woman of 26 came complaining of headache, double vision and paralysis of the left side of the face.

The family and past histories contained nothing of moment. The patient denied primary and secondary syphilis and had never been pregnant.

Present Illness. About eight weeks ago the patient began to have "frightful pains in the left side of the head and face"; and the skin of this region became very sensitive to touch. The pain was sharp in character and was always worse at night. In the beginning she was nauseated each morning for some weeks and frequently vomited. During the past three weeks she has suffered constantly with diplopia and this has caused her to walk unsteadily. Two weeks ago the left side of her face felt stiff and upon consulting her mirror she found that it was paralyzed. Since this time she has noticed too that her hearing has diminished in the left ear.

Physical Examination: Except from the neurological standpoint the patient was physically negative. There were no stigmata of congenital syphilis.

Cranial Nerves. There was no optic neuritis or other abnormality of the fundi. The pupils were equal in size, central, circular, regular in outline and reacted sharply to light and during accommodations. The left eye showed internal strabismus due to paralysis of the external rectus (nerve vi). There was marked diplopia. The corneal reflex was absent on the left (nerve v) and there was hyperesthesia to touch throughout the domain of the left fifth nerve. The lower jaw deviated noticeably to the left on opening the mouth (motor fifth). The left face was completely paralyzed including the frontalis and platysma (nerve vii). The ticking of a watch

could be heard 20 inches from the right ear, 12 inches from the left. There was slight diminution in the sense of taste in the left side of the tongue. The other cranial nerves were intact. Below the neck there was no motor or cutaneous disturbances and the reflexes were lively everywhere. No Babinski.

Wasserman four plus in blood and spinal fluid. There were 94 cells (mononuclears) per cubic millimeter in the spinal fluid with marked globulin reaction.

That the motor spinal nerves are seldom involved in syphilis of the nervous system whereas the sensory spinal nerves so frequently suffer, as in tabes, has long remained a curious and puzzling fact. In view of this the case which briefly follows is of extraordinary interest as an example, apparently, of syphilitic degeneration of a group of motor spinal nerves.

A sparely nourished man of 42 came complaining of paralysis with wasting of both arms.

The family history was negative, as was the past history except for an attack of gonorrhoea twenty years previously. He absolutely denied primary or secondary syphilis. His wife had had no miscarriages.

Present Illness: Two and one-half years ago he noticed a numbness of the thumb and two first fingers of both hands. He gradually lost the use of these fingers and both hands grew very weak and began to waste away. Now the arms became involved, and within seven months both arms became paralyzed and wasted badly. From the beginning he consulted one physician after another but without benefit. A spinal puncture was never done. He has never had any pain in the arms or hands during the present illness.

Physical Examination: The positive findings were as follows: The right pupil was larger than the left and both were irregular in outline. Both reacted very sluggishly to light but actively during accommodation. (Argyll—Robertson pupils). Both arms, shoulder girdles and hands were completely paralyzed and flaccid. There was no fibrillation and the paralyzed muscles did not react to either galvanism or faradism. No reflexes could be elicited in the arms. There was no sensory loss in the arms or elsewhere.

The Wasserman was strongly positive in the blood and spinal fluid. There were 119 cells (mononuclear) to the cubic

millimeter of spinal fluid with a large excess of globulin.

This case had been diagnosed as one of progressive muscular atrophy of the Aran-Duchenne type and no anti-syphilitic treatment given. It cannot be too strongly emphasized that the finding of Argyll-Robertson pupils alone is practically diagnostic of the presence of syphilis, and always demands an examination of the spinal fluid.

We have discussed thus far the effects of syphilis when the brunt of the disease falls upon the cerebro-spinal meninges. The spirochetæ reach the pia mater by way of the blood stream and syphilitic meningitis is always in the beginning a perivascular process. This is easily seen in histologic preparations where the blood vessels of the pia are seen to be surrounded by masses of mononuclear cells. The process then advances into the pia-arachnoid membrane forming either a diffuse sheet-like thickening or localized gummatous nodules. This process is usually basilar; only occasionally are the meninges of the convexity involved.

The blood vessels always suffer. The smaller ones are completely obliterated by the granulomatous tissue, and the larger vessels develop not infrequently syphilitic processes in their walls which tend to weaken them and decrease their lumina. It is to this syphilitic endarteritis that we refer when we speak of vascular syphilis, and I can best illustrate its effect upon the central nervous system by briefly citing an example of the disease which recently came under my care.

The patient, a man of 41, came complaining of weakness of the left leg following a paralytic attack two years ago.

The family history contains nothing of importance. The patient is married and has two healthy children: the wife has had no miscarriages. He has always been healthy and has worked very hard physically and mentally. Since childhood he has not been ill enough to be in bed until the present illness. He has led the life of a very active mill agent, working hard, drinking frequently with customers and smoking ten to fifteen cigars a day. He denies primary or secondary syphilitic manifestations.

Present Illness: Weakness of the muscles of the left side began with a hemiplegic attack two years ago. This major attack was the culmination of a train of previous symptoms. For some three or four months preceeding the

hemiplegic attack he complained to his wife of a feeling as though worms were crawling in his lips and left side, and the fingers of the left hand became numb from time to time. He got out of bed one morning feeling very giddy and soon fell to the floor owing to sudden weakness of the left leg. He was nauseated and vomited but did not lose consciousness. After remaining in bed six weeks under a physician's care he went to Atlantic City, recovering completely from the attack. He resumed work but says he had lost all interest in his occupation and tired very easily. Some ten days after this he had a second similar though less severe attack, and while recovering from this had a third severe hemiplegic seizure during which he lost consciousness for some hours. The left side was very weak when he regained consciousness but he insists there was no absolute paralysis. He has been slowly recovering since and is now much improved though still incapable of resuming work. His wife says he has become very irritable and emotional. Recently he encountered a friend in a street car and for no obvious reason burst into tears.

Physical Examination: The patient is a healthy looking, well nourished man. There is no general glandular enlargement and no external evidence whatsoever of syphilis. The lungs and heart are negative, and there is only a slight degree of thickening of the peripheral blood vessels. The systolic blood pressure measure 115 mm of mercury, diastolic 70. The abdomen is negative.

Neurological Examination: The right pupil is larger than the left and is irregular in outline. Both react actively in accommodation but sluggishly to light, the right more so than the left. The cranial nerves otherwise show no defect. There is no facial weakness. The retinal arteries, as seen with the electric ophthalmoscope, are very slightly tortuous and the light streak a little broadened. They do not compress the veins where they cross them. The veins are not engorged and there is no exudate or hemorrhage in either fundus. The outlines of the discs are clear and color normal.

Sensory examination reveals no loss to touch, pain, heat or cold, No Romberg. No ataxia.

There is slight but quite definite motor weakness in the left arm and leg and the left leg is moderately spastic.

The biceps, triceps, radial, knee and ankle reflexes are exaggerated upon the

left side, normal upon the right. The left abdominal reflex is feebly present, the right very active. No ankle or knee clonus. Sphincter control good.

The patient's age, the course of his illness and the condition of the pupils all strongly indicated in this case the necessity for an examination of the blood and spinal fluid for syphilis. A spinal puncture was therefore performed. The cells were counted in the fluid with the ordinary hemocytometer and numbered three to the cubic millimeter—well within the normal. The Wasserman reaction was strongly positive using three-tenths and five-tenths of a cubic centimeter of cerebro-spinal fluid. These findings in the cerebro-spinal fluid namely, no lymphocytosis with a weakly positive Wasserman, are frequently present in cases of cerebral syphilitic arteritis, contrasting strongly with the usual findings in meningeal syphilis, tabes and general paresis where the lymphocytes are much increased.

It is highly improbable that the case just cited would have been diagnosed as syphilitic endarteritis without the aid of laboratory methods. The diagnosis of apoplexy was formerly invoked to cover such cases. As a matter of fact it not only covers them but completely conceals their most hopeful feature. Vascular disease of whatever nature occurring in a man under forty-five demands that syphilis be excluded as the cause.

The effects of syphilis of the meninges and of the blood vessels, when these structures are more affected than other parts of the nervous system, have been considered. It happens not infrequently, however, that meninges, blood vessels and parenchyma are simultaneously involved. The clinical picture then depends entirely upon the relative degree of involvement of the various components. An illustration of this is furnished by the highly interesting type of cerebro-spinal syphilitic lesion which Erb, the famous Heideburg clinician, has called "syphilitic spinal paralysis". I have examined and have thorough notes upon seven cases of this peculiar syndrome which have come under my observation within the past two years. The symptom-complex of this affection is highly characteristic. In its pure form the patient shows a paresis of the legs without however any marked spasticity of the muscles; the tendon reflexes of the legs are greatly increased and the Babinski phenomenon is usually present; the bladder is always involved

leading to urgency and frequency of urination; there are seldom any objective sensory disturbances though paraesthesiae of all kinds are common. These points are well illustrated by the following case.

The patient, a small, sparsely nourished, man of 35 came complaining of a glowing sensation in both legs and feet, accompanied by weakness and stiffness of the legs and inability to hold his urine.

He contracted syphilis three years ago and was under treatment for seven months off and on. Two years ago he began to suffer with "fiery darts of pain" in the lower abdomen which gradually involved the back, forming a band or girdle of painful sensation around the body. These pains would sometimes pass into the legs and frequently kept him awake at night. At this time he began to have great urgency of urination which gradually became uncontrollable. For the past eighteen months he has worn the inner tube of a bicycle tire strapped to the leg as a urinal. Without this device he says he would constantly wet his clothes. For the past year he has had numbness of the legs and toes, and his gait has become weak and unsteady. During the past two years he has had periods of marked improvement but these have always ended in relapse. He complains of weakness of the legs with a "drawing feeling in them".

On physical examination the pupils are both irregular in outline, the right larger than the left and neither of them react to light, though contracting actively in accommodation (Argyll-Robertson pupils). The arms and trunk are free from abnormalities. Both legs are weak, especially the extensor groups of muscles, but there is no spasticity except in movements of the right ankle which is very spastic. The gait is unsteady and spasticiparetic in type, the toes scraping the floor as he walks. Rombergism well marked.

There is no loss of cutaneous sensibility anywhere despite the paraesthesiae complained of. There is slight loss of the sense of position and passive movement in the right leg and foot. The reflexes are normal in the arms, but both knee-jerks and achilles-jerks are exaggerated, the right more than the left. The epigastric and abdominal reflexes are absent. The Babinski reflex is positive on the right, doubtful on the left. There is marked urgency and precipitancy of urination.

The Wasserman was strongly positive in the blood and spinal fluid and in the latter there were 52 monocuclear cells per cubic millimeter with a well marked globulin reaction.

The pathologic lesion in cases of this type has been shown by numerous observers to be a meningo-myelitis with degeneration of the lateral pyramidal and Goll's tracts. The blood vessels, too, usually show syphilitic endarteritis.

Under parenchymatous syphilis of the central nervous system we now place the so-called para-syphilitic diseases, tabes dorsalis and general paresis. So much has been written in recent years concerning these two diseases that they need only be discussed very briefly here. And yet in their incipency they are by no means always easy to diagnose. When they reach the text-book-description stage the damage has been done and therapy can only be palliative. In their beginnings both are all too frequently diagnosed as neuresthenia—an error which is easily made unless the patient be subjected to a minute neurological examination.

In the diagnosis of early tabes and general paresis no one finding can be compared in pathognomic significance to the pupillary changes constantly present in these diseases. Few physicians are unfamiliar with the typical Argyll-Robertson pupils with their utter fixity to bright light, and when looked for they are difficult to mistake. There are different degrees of the fixed pupil. A sluggish reaction to light in a patient under fifty, especially if combined with differences in the size of the two pupils and irregularity of their outlines, is almost as valuable evidence of syphilis as the typical Argyll-Robertson phenomena. Any pupillary abnormality is to be regarded with suspicion and the Argyll-Robertson pupil is for all practical purposes diagnostic of syphilis.

A tremendous advance in the diagnosis of syphilitic nervous diseases has been made in the more frequent employment of lumbar puncture. It is a procedure which when properly done causes a minimum of discomfort to the patient and furnishes a maximum of diagnostic data. The cells present should be counted at once and not after the spinal fluid has been allowed to stand. My own practice is to fill the capillary tube of the white blood pipette to the bulb with ten per cent. acetic acid and after some few cubic centimeters of spinal fluid have run from the needle to fill the pipette directly

from the mouth of the needle itself. In this way one avoids as a rule the slight admixture of blood which often accompanies the first flow of fluid. Where it is impossible to do this the fluid can be agitated for five minutes in the test tube at a later time and a preparation counted, but some sacrifice of accuracy is necessarily involved in this. A cell count of more than ten per cubic millimeter should always be regarded as pathological. A test for globulin by the Nonne or Noguchi method should be made and the fluid tested by the Wasserman technique. In tabes about 66 per cent. of spinal fluids yield a positive Wasserman reaction whereas the fluid of general paresis is almost uniformly positive.

The description of general paresis as usually given in the text-books is of the well developed and advanced stage of the disease. The impression given is that in general paresis one has to do with an insane person full of grandiose delusions, with memory gone or very faulty and speech greatly impaired. These are the characteristics which first come to mind when general paresis is mentioned. But as seen in the run of general work paresis may and frequently does fail to conform to this picture. Let me cite an example of a form of general paresis in which the psychic features are by no means outstanding and where their elicitation is only accomplished by careful search. It is the physical rather than the mental features which are most obvious.

A strong, well made man of 35 came complaining of "fits."

His family and past histories contain nothing of importance. He denies ever having had any venereal disease whatsoever, and there is no history of secondary syphilis.

One year ago he had a sudden attack of loss of consciousness. He remembers nothing of this and found himself in a hospital some hours later. His recovery was complete. Since this time he has had repeated attacks or "fits", so that he has been forced to give up work as a clerk.

His mother says that his mental condition has changed greatly in the past year. From being of a sunny, happy disposition he has grown quiet, morose and irritable. He has never however done anything to lead her to believe his mind was in any way affected. He has had no delusions of grandeur, persecution etc. The patient denies that he is at all ill and has no insight whatsoever into his condition. He says his memory is good and that his speech has not changed in any

way. His last "fit" was one month ago.

On physical examination one is struck at once by the blank and lethargic expression of the patient. He seems quite uninterested in his surroundings, and doesn't volunteer to speak unless directly addressed. He is perfectly orientated as to time and place and is able to recall recent events in his life with seeming sureness and accuracy. This is only apparent however for when asked to remember a series of phrases of a simple and easily remembered nature as "Methodist Episcopal Church," "The Commonwealth of Virginia," "The Third Light Infantry Brigade" he forgets the first altogether or fails to repeat the phrases in the order given. He likewise mutilates the words, omitting entire syllables in his pronunciation. He seems, however, perfectly pleased with his performance of the task. These rather rough tests serve at once to establish the presence of a considerable degree of memory and attention loss. Despite this he does not give the impression of being seriously diseased mentally.

The pupils are irregular in outline and vary in size, the right being larger than the left, both react only very slightly to light but actively during accommodation. There is slight but easily appreciable weakness of the right face and the facial muscles, especially those of the lips are very tremulous. This tremor is of an irregular, jerky character and is also present in the protruded tongue. The patient is otherwise completely negative except for rather exaggerated deep reflexes throughout and the presence of an inconstant and rather feeble Babinski on the right.

The Wasserman was strongly positive in the blood and spinal fluid and in the latter there were 162 lymphocytes with a strongly marked globulin reaction.

Such a case of general paresis might well escape detection unless minutely examined. It illustrates most forcefully the unobtrusive character of the early mental symptoms of paresis, and such cases should make us constantly more diligent in carefully analyzing mental features which may mask themselves behind a seeming neurasthenia.

Through the advent of salvarsan and the multitude of experiences which it has engendered there has emerged a more optimistic and thorough knowledge of the treatment of cerebro-spinal syphilis. In this therapeutic advance the Wasserman reaction has played an inestimably important role, for now the indications

for, and the results of treatment can be accurately determined. A positive Wasserman reaction is generally conceded to indicate vigorous treatment even in the latent form of syphilis, for where there is a positive Wasserman there are spirochetes.

One need not enter into a discussion of the methods of employment of mercury, salvarsan and iodides in the treatment of cerebro-spinal syphilis; they are after all governed in large measure by personal experience and the exigencies of each case. The intraspinal method of treatment of cerebro-spinal syphilis does however demand brief discussion at this time, for our ideas concerning it are necessarily as yet uncrystallized. Owing to the impermeability of the choroid plexuses of the cerebral ventricles, which secrete the spinal fluid, for toxic substances introduced into the blood stream, salvarsan does not reach the subdural spaces of the brain and cord when injected intravenously. This fact, together with the brilliant results of intraspinal treatment in meningococcus meningitis, has led many observers to attempt the more or less direct introduction of neo-salvarsan and salvarsan into the spinal fluid.

Swift and Ellis (6) have recommended the use of salvarsanized serum obtained from the same or another patient previously treated with salvarsan. Working with Swift and Ellis at the Rockefeller Hospital I had the opportunity to follow their results for more than a year and became convinced of the efficacy of their treatment when combined with other forms of intensive antisyphilitic medication. Several objections have been urged against their method in addition to the obvious difficulties of the technique. The quantity of actual salvarsan injected is infinitesimal, and there is no means of ascertaining the quantity injected each time. It has been suggested that the benefits derived from their treatment are due not to the salvarsan content of the serum but to the presence of syphilitic anti-bodies, and some workers claim equally good results from the use of serum alone.

Certain French and German clinicians to overcome these objections have introduced neo-salvarsan dissolved in salt solution directly into the spinal fluid, employing doses up to fifteen milligrams. This is unquestionably a very dangerous method of treatment. It is most painful, greatly increasing as a rule the lightning pains of tabes, and usually causing severe

and prolonged sphincter disturbances (7). I have followed over a period of months two cases that were treated by this method in one of the clinics of this country. Both showed marked ill effects due to the treatment, one having complete inability to void for three weeks and the other losing his remnant of sexual power. Both were tabetics and their lightning pains were rendered unendurable for a few days following treatment.

I have shown experimentally upon dogs that when a solution in saline of the vital stain "trypanblau" which, like salvarsan, can be injected intravenously in large doses without harm but causes severe symptoms when injected subdurally, is diluted with blood serum it is robbed of its toxic and irritating effects and can be used intra-spinously with impunity. This experimental evidence has an important bearing upon intra-spinous salvarsan therapy, for the behavior of "Trypanblau" is quite comparable with that of salvarsan, and shows that blood-serum has a protective action for toxic substances which should not be disregarded. Certainly the results of injecting neo-salvarsan in salt solution are not brilliant enough to warrant the use of this dangerous method, whereas as Draper (8) has recently shown neo-salvarsan causes far fewer untoward symptoms when combined with serum than is the case with cases treated with solutions of neo-salvarsan in normal saline solution, thus confirming my experimental results of last year.

In conclusion one may say that the intraspinal treatment of cerebro-spinal syphilis with neo-salvarsan has been proven to be a helpful auxiliary to other therapeutic measures and that the Swift-Ellis technique is safest. The newer method of direct injection of neo-salvarsan and blood serum will probably supersede the Swift-Ellis method in time because of the great advantage it possesses in accuracy and certainty of dosage. The employment of neo-salvarsan dissolved in saline for intraspinal injection has been repeatedly shown to be dangerous, and despite its alluring convenience can not be recommended.

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403 E. Franklin Street.

Cod Liver Oil For Children.

There are few remedial agents which operate with such marked beneficial effects as cod liver oil in the debilitated states of children, but so far as the crude oil, is concerned its unpalatable nature makes it quite impossible of continued use in these little patients. For this reason a cod liver oil product that is not only palatable but which may be continued for a considerable length of time becomes all the more desirable. Such an agent is to be found in Cord. Ext. 01. Morrhuac Comp. (Hagee), in which are combined the active therapeutic principles of the oil without its obnoxious properties.

ad 7-15

Glyco-Thymoline For Colon Flushing.

Inactivity of the colon with its retention of fecal matter and consequent distention and interference with the work of the rectum is a prime factor in the causation of hemorrhoids, constipation and in the event of septic matter in the feces, auto-infection.

The rapid elimination of all septic matter, and the promotion of an aseptic condition of the intestinal canal is within the province of Glyco-Thymoline. One pint of a ten per cent. solution at a temperature of 100 degrees introduced well into the colon will produce a quick evacuation without pain or discomfort. This followed by three or four ounces of a twenty-five per cent. solution at the same temperature, retained, will speedily restore to normal conditions by inducing exosmosis, relieving pain by its anesthetic property and promoting a general aseptic condition by its power of cleansing.

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CHARLOTTE, N. C.**

THE PROFESSION OF MEDICINE AND MODERN CITY GOVERNMENT.

That the modern doctor of medicine is possibly the closest as well as the most capable and conscientious student of humanity at close range to be found in our present day social make up cannot be gainsaid, and it is more and more generally being recognized that if one desires a critical analysis of local sentiment on a given topic, ask the doctors, is possibly the best way of ascertaining the real conditions. Naturally the reason for this state of affairs is obvious, the training of the medical man, the habit of close observation coupled with a characteristically dogged determination to get at the real facts in the case before him, coupled with an absence, as a rule, of preconceived opinions and a desire to find the facts to fit the theory, peculiarly fit the doctor to give thorough and elucidating study to the grave problems of the modern social life affecting the denizens of both urban and bucolic territory.

And it may be said with certain truth, that of all men today there is not a citizen of the State who is giving more thoughtful and considerate investigation of social problems than are the practitioners of the healing art in town and rural precincts alike. Hence in line with this thought it was not surprising that the great international authority on municipal lighting, Mr. Arthur Glasgow of England, now, though originally, himself a native Virginian, we believe, should have on a recent visit to Richmond, entertained the member of the Richmond Academy of Medicine with a dissertation concerning his advanced views of the best form for the government of a modern city.

Disclaiming any purpose ulterior, and alike the suggestion of an absolute unqualified one-man power in municipal government, he stressed simple business methods as generally practiced in private or business corporation affairs in America rather than the casual administration of governmental matters as witnessed in the average municipality of today which he characterized as lamentably inefficient

and gross to a degree.

"Municipal business," he continued, "is just like other business; and to be successful, municipal administrations must be like other successful business administration. He said that it was not necessary to change a business charter to secure efficiency, as a corporation charter leaves business free to choose the best men. But in the case of a city, with particular reference to Richmond, the people are tied hand and foot, and what is needed is more freedom and opportunity for efficiency in the administration. He decried that section of the constitution of Virginia which prescribes that only qualified voters and residents are eligible to state, county or municipal office, for, he pointed out, the services required of the heads of various departments are highly developed arts and require specialists. Therefore, as there are no specialists in Richmond, freedom of choice is absolutely essential to the efficient administration of the city.

Mr. Glasgow's plan comprises a mayor and council, "charged with the definite purposes of creating a permanent organization of maximum efficiency for the administration and development of our city. This mayor would be the man among us possessing the highest qualifications for this particular task; with the ability, the determination and the understanding to advance the broadest interests of our citizens, not only of today, but of tomorrow. With painstaking care, he would select and nominate to the council the best men anywhere obtainable; and, upon the approval of the council, he would employ them as commissioners." But this, said Mr. Glasgow, would not mean the displacement of a single honest man now employed by the city; it would simply mean new and free channels of maximum usefulness open to them.

"We should then," he continued "have a board of commissioners, consisting of five or more members, representing the highest scientific, technical administrative skill in their respective departments; under the presidency of a mayor capable of developing, for the common good, their utmost individual and combined potentialities."

DECISION OF NORTH CAROLINA SUPREME COURT ON PRACTIC- ING WITHOUT LICENSE BY NON-DRUG GIVING PHYSICIAN.

An individual calling himself "Dr. Siler" was engaged in Greensboro, N. C.,

in the practice of "Chiropractic and Suggesto-Therapy." He was indicted for practicing without license and upon a special verdict the trial judge found him not guilty, and the ruling of the lower court was appealed to the Supreme Court for final action.

Chief Justice Clark in the decision held the Act of 1913 amending the Act of 1907 requires that all non drug-giving physicians shall be licensed by the non-drug board before engaging in the practice of their profession. In the case in question it appeared that "Dr. Siler" was not, according to his contention, practicing osteopathy, but was engaged in the "practice of Chiropractic and Suggesto-Therapy," and received compensation therefor: Chiropractic, it was submitted to the Court, "is a system of treating human diseases without the use of drugs by mental suggestion" and it was admitted that the defendant had not been licensed by the Osteopathic board. The defense contended that the Act of 1907 as amended by that of 1913, does not require non-drug giving practitioners, other than osteopaths, to pass examinations or take out license, and that if it did, such requirement would be unconstitutional. The court opinion, after reviewing the law applicable, says, the Act of 1913 simply extends the Act of 1907 to require "the examination and licensing of all other non-drug giving practitioners, by whatever name known", and make those violating this statute, "guilty of a misdemeanor to the same extent as those had been who practiced as osteopaths without complying with the requirements of the Act of 1907".

The Chief Justice further stated. "In *State vs Biggs*, 133 N. C. 729 and in *State vs McKnight* 131 N. C. 723, this Court held that the object of such legislation was not to give special or exclusive privilege to such special body of men, but solely for the protection of the public and to prohibit imposition by any one passing himself off as competent to engage in a practice or calling of a public nature when he was incompetent to do so. Therefore it was held that the Act in regard to the practice of medicines and the examination prescribed therefore, could not embrace osteopaths who did not prescribe drugs or other medicine". The Chief Justice ruled the statute of 1907 as amended in 1913, was for the protection of the public by requiring all non-drug giving physicians to be regularly licensed, and that upon the special verdict the Court should have found the defendant

guilty. Reversed, this decision sets at rest a question that has been considered at different times in the state, and definitely adjudges at least by implication, the province of the State Board of Medical Examiners to be to examine and license physicians who give drugs, while it positively rules that all non-drug giving physicians, of whatsoever name, shall be examined and licensed by the State Board of Examiners of Osteopathy.

RECENT AMENDMENTS TO N. C. STATE MEDICAL EXAMINATION LICENSE LAWS.

The recent session of the N. C. State legislature made three important amendments to the laws regulating the licensing of physicians in North Carolina.

First, it provided the Board of Medical Examiners should meet annually in the city of Raleigh where its examinations are conducted. It also permits additional examinations to be held elsewhere in the state at the discretion of the board.

Second, it provides for an examination of under graduates at the end of their second year's work on the work of the first two years; grades are made and recorded for the final examination of the applicant two years later on the attaining of the degree of M.D. This will be a convenience to many young men who after completing the course and the college examinations of the first two years' work of medicine, will be appreciative of a state examination that permits the taking of the examinations on the two first year's work while the subject matter is fresh, thus avoiding the necessity of "cramming" on the primaries at the end of their medical college course.

Again, it will unquestionably exercise a healthful and stimulating influence upon the attendance of young men upon the classes of the junior medical colleges of this state—a result the promoters of the legislation were doubtless wise to, and a result perfectly legitimate and proper from the local view point.

Third, and by no means least, the statutes were amended so as to provide that the attorney general of the state shall, upon complaint of the state board of medical examiners, investigate the charges of violation of section 3645, '46 and '47, revisal 1905, made against any one, and if in his opinion the law has been violated, he shall direct the solicitor of the judicial district in which the offense was committed to bring criminal

action against the offending person or persons.

This latter amendment will place the direction of prosecutions for violation of the medical license laws of the state in large part, in the hands of the Board of Examiners who of course will be prompt to act on receipt of information from any reliable member of the profession.

THE HOSPITAL AS A HYGIENIC AGENT.

Of all the factors or agencies which, in our very complex and intricate modern civilization, are contributing to the world's health, progress and well being none occupies a more unselfish and honorable position than the hospital. The properly conducted hospital, by relieving pain, curing disease and saving life, is one of the most typical representatives of Christ like work that we have to-day. This is said advisedly and without in any way trying to minimize or belittle the many other agencies for good or human uplift that are in operation all around us. In the hospital many of the deaf are made to hear, the blind to see and the dumb to speak; the deformed, the maimed and the injured are put on their feet and sent on their way rejoicing; prattling, cooing babies and laughing, romping, rosy cheeked boys and girls stricken by some fell disease are snatched from the jaws of death and restored to their agonized parents; the blooming maiden is saved for her lover and the strength of the lover's arm is renewed to protect her and to fight the battles of life for his sweetheart; the loving mother is brought out of the very valley of the shadow of death and restored to health and strength to assist and encourage her husband and to cherish, guard and direct her children; the father on whom the very lives of wife, mother and children often depend is rescued from some disease or injury that would have ended life; and thus we find through the whole range of our social life from the regal palace to the lowliest cottage—nay even the most degraded hovel in the land—the beneficent activity of the hospital extending to all. But lest any should fail to grasp the true significance of these statements or to appreciate the social importance of the work—direct and indirect—that is being done by the hospital, we desire to call your attention to a few facts:

1. In the hospital a great number and variety of diseases are brought together, hence their symptoms can be studied there in a more thorough and systematic

manner and the most effective and approved methods of diagnosis and treatment can be carried out better than any where else.

2. The hospital is the only place in which the medical student and the nurse can receive that thorough and well rounded training that make them first class physicians and nurses and fit them to enter upon the duties of their professions.

3. After engaging in the practice of his profession—the most arduous and exacting in the world—connection with the work or teaching done in a hospital stimulates and arouses a physician to do his best; in order to keep in the van of progress he must be a student or investigator or both and this naturally leads him to contribute the results of his work to the journals of his profession and brings him in contact—directly or indirectly—with others who are doing similar kinds of work.

4. In this manner a craving for greater knowledge and efficiency is created and he joins medical societies and attends their meetings, takes part in the discussion of subjects there presented, and also attends post graduate courses to get broader views and acquire greater efficiency and skill.

5. Then, too, the work done by physicians as instructors in our training schools for nurses and medical students, like mercy, benefits both those who give and those who receive; it causes the physician to make a more careful and accurate study of the subject under discussion than he would otherwise do and it prepares the student for his calling and the nurse for her soothing and life saving vocation.

6. Doubtless everyone will at once perceive that all these things make better physicians in every way and that the good results are not confined to their work done in the hospital, but that every patient they see and treat in private practice receives the benefit of this increased knowledge and skill.

7. The hospital is the centre for accurate and systematic instruction and training in the principles of hygienic living; and this applies not only to the resident physicians and nurses, but also to the patients who are patrons of the institution, and their friends who visit them there. Here many lessons on cleanliness, personal hygiene and measure for avoiding contagious and infectious diseases are taught in an objective way and strongly impressed on the patients and

their friends who leave the institution to become centres for better hygienic living and radiate the gospel of health to those around them. Why, even the patient who grumbles and complains that he was starved in the hospital, on more mature reflection, will admit that he has learned a good lesson and that his ills were to a large extent due to improper or imtemperate eating or drinking or both.

8. Here, too, in the hospital is engendered that spirit of research and investigation which impels men to devote their lives to finding out the causes of diseases and the best means of preventing or curing them:

(A). Stimulated by the spirit and example of John Hunter, one of London's great hospital surgeons, Jenner was led to devote over twenty years of his life to the discovery and perfection of vaccination for the prevention of smallpox. His labors were crowned with complete success, and that dread disease which had swept like a devastating angel over the world, destroying millions of lives, is now under perfect control and smallpox has been stamped out wherever vaccination is properly used. During the 100 years between 1700 and 1800 A.D., one hundred of millions of people lost their lives from smallpox in Europe alone. Where the scourge then left a trail of horror and death it now scarcely exists at all.

(B). Aroused by the researches of Pasteur, Lister was convinced that the deaths due to septic poisoning following wounds and operations are caused by living germs and could be prevented. In connection with his large hospital service he undertook an extensive series of experiments to prove his belief and it is needless to remark that his efforts were crowned with wonderful success and his antiseptic treatment of wounds and its application in surgery and obstetrics was at once followed by a great reduction in mortality and the saving of thousands of lives every year. Indeed, modern aseptic surgery has reached such a degree of perfection, that operations which even 25 or 30 years ago would have been regarded as almost certainly fatal are now attended with very little danger.

(C). It was this same spirit of scientific research and love of humanity that led Robert Koch to devote his marvelous powers to searching out the causes of diseases and made him a mighty factor in laying the foundation of modern scientific medicine. His discovery of the bacillus of tuberculosis alone has done more good to humanity than all the con-

querors that have ever graced (or more properly speaking disgraced) the pages of history.

(D). Nor have these great achievements been confined to foreign countries. Our own devoted workers, Reed, Agramonte, Carroll and Lazear who imperilled their lives and two of whom became martyrs to science in their search for the means by which yellow fever is spread, furnish one of the noblest examples of self sacrifice in the history of our race. Their demonstration that this dread disease is conveyed solely by the mosquito has done more to open up and make the tropical regions of the globe habitable for civilized people than all the wars since the dawn of history.

(E). What made it possible to build the Panama canal? It was not the money of the United States; it was not the genius of Col. Goethals, the great engineer, nor was it the wonderful sanitary knowledge and administrative ability of our own Dr. Gorgas, who has converted the canal zone from a pestilential death trap into a veritable health resort, but it was the work done by those devoted martyrs of science who showed us how to stamp out yellow fever by getting rid of the particular kind of mosquito, *Stegomyia Calopus*, that conveys the disease to man; kill off these mosquitos or screen the yellow fever patients so that these mosquitos cannot get to them and become infected and you will have no more yellow fever. That this can be done is conclusively shown by Havana, which formerly was a regular pest hole but now is free from the disease; the same may be said of the Panama canal zone.

(F). The same thing is true of malaria; the patient, long continued investigations of Laveran, Ross and many other workers have shown that this insidious scourge which has caused the loss of millions of lives and untold millions of wealth; that has converted some of the richest and fairest parts of the earth's surface into desolate wastes or infernos of disease, is caused by a germ which is conveyed to man only by another species of mosquito—*anopheles claviger*. Armed by this exact knowledge as to the cause of the trouble, sanitarians are preparing for the conquest of the hitherto pestilential or death ruled portions of the world. The marvellous fertility of these lands and the undreamed wealth that their reclamation will bring ought to touch even the pocket nerve of the great financiers who can be reached in no other way.

When we think of the six hundred thousand lives lost every year from preventable diseases that could be saved if these diseases were properly understood and controlled; it would arouse every one of us, physicians and laity alike, to work for the immediate establishment of a Department of Health by our National Government, whose business and duty it should be to adopt proper measures for stamping out these diseases and saving these lives to join in the great procession of our country's progress and happiness. A few years ago we were all shocked and horrified by the wreck of the Titanic and the great loss of life that it caused. Why, then, do we sit idly by when more lives are lost every day of the year than went down to death in the Titanic? Why is it that this great and intelligent people does not rise in its might and crush the hordes of superstition, selfishness and greed that are using every argument and weapon in their power to prevent the adoption of the greatest conservation measure that the world has ever seen—the establishment of a National Department of Health whose head shall be a member of the President's Cabinet and whose purpose shall be the conservation of the health, physical vigor and happiness of the people of the United States and indirectly of the whole world.

Editorial News Items.

We have received the volumes XXXI and XXXII of the Transactions of the Royal Academy of Medicine in Ireland. This makes our files complete of what we consider the best thirty-two volumes in our library. The editor considers this set of books almost invaluable.

If this medical society had adopted the monthly medical journal method of keeping their records thirty-two years ago, it is doubtful whether they would have scarcely any record at all older than a few years. We only have two or three medical journals thirty-two years old that have a complete file and they exist in the editor's library. An annual volume of transactions is the only accurate and practical method of keeping the proper record of a society.

Dr. William J. Gills, Farmville, Va., died of pellagra at the Johnston-Willis Sanatorium in Richmond, Va., May 23, 1915, at the age of thirty-seven.

He was educated at Randolph-Macon College and in 1901 received the degree of M.D. from the University Medical

College at Richmond, Va., and enjoyed the confidence of a large and increasing number of patients.

He is survived by a widow and one son, the latter seven years of age. Dr. Gills is said to have first recognized the disease in his own person more than a year and a half prior to its fatal termination, and continued actively attending to his professional duties until a few weeks prior to his death when he sought the palliative comforts of a city hospital, realizing it is said the end must be near and his recovery hopeless.

The recent death of the Virginia physician coupled with that of a South Carolina medical man only a few months since, both apparently strong vigorous men of regular habits, and we will assume possessed of both the knowledge and ability to secure a balanced ration, suggests the possibility of there being other important etiological bases for pellagra than dietetic inefficiency. Certainly we may truthfully say, while our knowledge of the symptomatology, progress, duration, and course of this formidable disorder, has grown greatly within the past eight years since professional attention has been acutely focussed thereon, yet aside from the fact that we have eliminated a number of suggested causes, and are probably nearer a correct solution than ever before, we have yet something to learn as to the precise character of the causative factors in pellagra. It is a subject of special concern to Southern physicians, for in addition to its greater prevalence in the South, there is a manifest disposition in some quarters of the East and North, to minimize its existence there, and to unconsciously perhaps, enlarge on the possible gravity of the disease as related to health conditions in the South. Let us have continued scientific study of the disease and the full facts.

\$20,000.00 has been tendered the city of Wilmington, N. C., by a donor who desires that his name be not given to the community at this time, for the purpose of providing an institution for the care of infants whose homes do not provide proper facilities for their care when ill. The philanthropic citizen tendering the benefaction announces the availability of the funds as soon as a sufficient sum to guarantee maintenance charges is secured.

The public health work of North Carolina was the subject of most flattering commendation from sociologic and other public health workers at the recent session of the Southern Sociological Association in Houston, Texas, and on all sides were heard words of eulogy and commendation to the extent of ungrudgingly placing the Old North State in first rank of up-to-date States in public sanitary development and methods.

Anti-Typhoid vaccination is growing greatly in favor in the South just now, and several of the state boards of health are furnishing vaccine free to all comers, and in addition furnishing the doctor to administer the vaccine without expense to the applicant. About one-sixth of the North Carolina counties, covering more than one-fourth of the State's population have provided for free vaccination throughout the county health service. This movement is destined to increase, and with it the income of the profession from the treatment of typhoid fever cases will show a continued decrease.

Dr. D. C. Absher, whole-time county officer of Vance County, N. C., has returned from Texas where he presented a valuable contribution to public health at the sociological congress.

The new private water system authorized by the last legislature at a cost of \$80,000 for the State Hospital for Insane at Morganton, N. C., is nearing completion, and is one of the finest of the many excellent gravity lines in the mountain section of the State.

At Vanceboro, N. C., on May 30, 1915 **Dr. Benjamin J. Smith** passed at the age of 69 years. A graduate of Bellevue Medical College, a soldier in the Confederate army, a member of the Episcopal Church, an upright citizen, a practitioner respected and honored by an appreciative clientele, his going leaves a void in the community he served so long and faithfully.

Friends and admirers of **Dr. J. Nermont Baker**, Montgomery, Ala., congratulate both him and the Alabama State medical Association on his recent preferment in that organization from the post of Secretary, which he has filled with such signal ability for some years past, to the Presidency of the Association. In extending the Journal's felicitations, no higher compliment may be paid **Dr.**

Baker than to predict that he will sustain the dignity and honor of his new position as fully as he measured up to the important duties and grave responsibilities of the secretarial office.

Dr. Wm. Greene Torrence, one of the best known of Asheville's colored physicians died at Asheville, N. C. May 22, 1915. A graduate of Shaw University, and post-graduate of Dearborn College in Chicago, his life had been a very active one in behalf of every movement for the uplift of his race.

The finals of the Medical College of Virginia were held in Richmond, Va. May 30 to June 1st, inclusive. The recent amalgamation of this excellent institution with the University Medical College of Richmond, and the North Carolina Medical College of Charlotte, N. C., has added much to its strength, and with the well appointed new college laboratories and perfected appointments, places it in the front rank of Southern schools.

The following program was carried out:

Sunday, May 30

8:15 P. M.—Baccalaureate sermon by **Rev. Thomas A. Smoot**, D. D., Centenary Methodist Church.

Monday, May 31.

11 A. M.—Meeting of the Board of Visitors, College building, Twelfth and Clay streets.

8:30 P. M.—Meeting of Alumni Society, Chamber of Commerce Auditorium, Sixth and Main streets.

Address to Alumni Society, **Cary T. Grayson**, M. D., Washington, D. C.

10 P. M.—Smoker and buffet luncheon, Commonwealth Club.

Tuesday, June 1.

10 A. M.—Meeting of Alumni Society, College building, Twelfth and Clay street.

Address by President of Society, **Ben K. Hayes**, M. D., Oxford, N. C.

Scientific session—Psychoanalysis in Some Neglected Types of Nervous Diseases—**A. L. Tynes**, M.D., Staunton, Va.

Pyorrhoea—**R. C. Walden**, D. D. S., Richmond, Va.

Some Studies in Sciatics—**J. Ross Hunter**, M. D., Hansford, W. Va.

Early Recognition and Rational Treatment of Pulmonary Tuberculosis, **W. K. McCoy**, M. D., Gum Springs, Virginia.

Election of officers.

General business.

Tuesday, June 1.

8:30 P. M.—Commencement exercises

at city auditorium—Public cordially invited. Admission without ticket.

Invocation—Rev. W. A. Copper, D. D.
Report of year's work—Stuart McGuire, M. D., Dean.

Address to Graduating Classes—Hon. Stanyarne Wilson.

Conferring degrees, graduates Medical College of Virginia—Stuart McGuire, M. D., Dean.

Conferring degrees, graduates North Carolina Medical College—J. P. Munroe, M. D., of Charlotte, North Carolina.

Announcement of Hospital Appointments.

Benediction—Rev. W. A. Cooper, D. D.

10:30 P. M.—Reception, Masonic Temple.

Dr. J. E. Daniels, Greenville, S. C. has gone abroad to engage with the Allies in the war in Europe and is now stationed at Paignton, South Devon, England.

The Fifth District Medical Association of South Carolina held its session at Chester, S. C., May 20, 1915. Papers were read by Drs. G. T. Tyler, Greenville; F. A. Coward, Columbia; E. W. Pressley, Clover; J. J. Watson, Columbia, and Chas. A. Mobley of Rock Hill. A table discussion of interest followed the formal papers and discussions. The Chester County Society tendered the Association a banquet at the Carolina Inn and an automobile excursion to points of interest. The following officers were elected:

President.—Dr. E. W. Pressley, Clover, S. C.

Vice-President.—Dr. Samuel Lindsay, Winnsboro, S. C.

Second Vice-President.—Dr. R. T. Ferguson, Gaffney, S. C.

Secretary-Treasurer.—Dr. Geo. A. Hennies, Chester, S. C.

The Richmond Academy of Medicine, (Va.) was regaled with a most interesting lecture by Arthur Glasgow, London's famous gas engineer on May 25. Mr. Glasgow is a native of Richmond, and has achieved worldwide distinction as an authority on problems concerning municipal lighting.

Dr. T. F. Meisenheimer, Morven, N. C. died at his home May 27, 1915 at the age of 63. He graduated from the University of New York in 1880 was licensed the same year and joined the North Caro-

lina State Medical Society also in 1880. He was a capable physician, a man of character, an upright citizen, and his passing is a distinct loss to both people and profession.

Dr. G. L. Hagon-Burgen of Germany was a recent visitor at Spartanburg, S. C., and while stopping in that city gave out an interview in which he stated the priority of America in the use of "twilight-sleep" anaesthesia in obstetrics is admitted in Germany.

Dr. C. O. Abernethy, Raleigh, N. C., has returned from an extended stay in New York city doing post-graduate work. He announces his intention to devote his entire professional attention to genito-urinary and skin affections.

Dr. Lewis B. McBrayer, Supt. State Sanitarium for Tuberculosis, Sanatarium, Hoke Co. N. C., has been commissioned Post Master at that point.

At Leicester, Buncombe County, N. C., May 10, 1915, Dr. J. M. Stevens died in the eighty-seventh year of an active and eventful life. A veteran of the civil war, he served four years in the Confederate Army, and an active practitioner of medicine for 62 years in Buncombe County, he died at a ripe age with a record of service exceeded by few general practitioners.

Dr. W. K. Reid, Charlotte, N. C., has been elected City Physician at a salary of \$1,200 per annum.

Dr. Eugene P. Gray, Winston-Salem, N. C., has been elected City Physician of that city and assumes the directions of its admirable health department.

It is reported the Rockefeller Sanitary Commission will resume its anti-hookworm activities after July 1, 1915, in the various Southern States. The four years work which was carried on up to the beginning of 1915, accomplished much, but the work is incomplete, and the Commission hopes to arrange with the various State Boards of Health for opportunities for renewed work.

Dr. J. R. Gordon, Chief of Bureau of Vital Statistics North Carolina Board of Health, is making a special canvas of certain derelict counties of the State with a view to securing more efficient and complete reports of births and deaths. It is generally believed the deaths as re-

ported are fairly correct now in practically almost all of the North Carolina counties, but the health department is not satisfied that all births are being reported. Prosecutions have been had in a number of the counties for failure to report, and with the growing interest in the subject it is confidently expected to attain a fairly satisfactory average of reports.

Dr. Owen Kenan, Wilmington, N. C., was one of the rescued passengers of the ill-fated *Lusitania*. He was going abroad to engage in red cross service with the armies of the allies, and narrowly escaped with his life, having sank twice before being rescued. He was ill in Queenstown for several days but is reported well.

Dr. Wm. deB. MacNider, Chapel Hill, N. C., of the University of North Carolina Medical Department has sold the United States his residence lot for a postoffice site for \$8,500.00.

The residence of **Dr. G. D. Gardner**, West Asheville, N. C., was practically destroyed by fire at an early hour on the morning of April 22, 1915 with a loss of more than \$1,000.00.

Dr. Oscar McMullen, Elizabeth City, N. C., one of the States' most esteemed medical gentlemen, is spending a few weeks on the Pacific slope.

Dr. Otto V. Huffman, secretary of the New York State Board of Medical Examiners, has been elected secretary of the faculty and executive head of Long Island College Hospital, Brooklyn, in succession to the late Dr. Joseph H. Raymond. Dr. Huffman is a native of Dayton, Ohio, is 33 years old and is a graduate of Denison University and the College of Physicians and Surgeons of Columbia University, 1903.

Dr. H. R. Tucker, Raleigh, N. C., who has been doing post-graduate work for a few months past has returned and resumed practice.

Dr. Geo. M. Cooper, Clinton, N. C., has been placed in charge of the newly created Bureau of Rural Sanitation, and opened his office in the building occupied by the State Board of Health at Raleigh, May 4. With the increasing of county health work the correlating of the work of the various counties, and the de-

veloping of rural sanitation along new and more extended lines become a logical sequence, and it is believed Dr. Cooper's work will be most helpful.

Dr. J. W. P. Smithwick, LaGrange, N. C., has been elected mayor of that city.

Dr. L. W. Elias, Biltmore, N. C., has been elected one of the town aldermen.

Dr. H. M. Biggs, Rutherfordton, N. C., has been elected a member of the board of aldermen of his home town.

Dr. Raymond Pollock, New Bern, N. C., has returned from post-graduate study in New York City and resumed practice.

During April 25 prosecutions, 23 physicians and two undertakers, were made in North Carolina for violations of the vital statistics law.

Dr. J. M. Russell, Canton, N. C., has been commissioned Assistant Surgeon Canton Ambulance Corps, N. C. N. Guard, Vice Dr. J. R. McCracken, resigned.

Dr. Ernest L. Morgan, Clyde, N. C., has removed to Canton, N. C.

Dr. Clarence Klutz, formerly of Salisbury, N. C., now of El Paso, Texas, has been appointed City Physician of El Paso.

Dr. S. E. Hughes, Danville, Va., has taken a cottage at Asheville, N. C., and will spend his vacation in that attractive mountain resort.

Sixty physicians attended the recent meeting of the Medical Society of Northern Virginia and the District of Columbia, held in Alexandria, Va., May 21. Papers were read by Drs. Tom A. Williams, Howard Hume, B. M. Randolph, Wallen Griffith, John D. Thomas, Wm. Mallory, J. T. Jones, C. S. White and W. T. Davis.

Officers elected as follows:

President—**Dr. S. B. Moore**, Alexandria, Va.

Vice-President—**Dr. J. B. Nichols**, Washington, D. C.

Vice-President—**Dr. G. R. Cottingham**, Remington, Va.

Recording Secretary—**Dr. Thos. A. Groover**, Washington, D. C.

Corresponding Secretary—**Dr. Joseph**

D. Rogers, Washington, D. C.
Treasurer—Dr. Wm. L. Robey, Herndon, Va.

The Fifth Annual Session of the North Carolina State Health Officers' Association will be held in Greensboro, N. C., on Monday, June 14, the day prior to the meeting of the State Medical Society under the presidency of Dr. W. M. Jones, Greensboro; Dr. D. E. Sevier, Vice-President, Asheville; Dr. W. S. Rankin, Secretary, Raleigh.

The program is an excellent one and will command the attention of all interested in the State's sanitary development.

Besides the President's address there will be the address of welcome by Mayor T. J. Murphy, of Greensboro, and the response by Dr. B. K. Hays, of Oxford. A symposium on school sanitation will be handled by Supt. Thos. R. Foust, of Guilford county, and Dr. Chas. T. Nesbit, health officer of New Hanover County. Dr. John A. Ferrell, of New York City, will discuss the "Rural Sewage Problem." The "Problem of Contagious Diseases" will be dealt with by Dr. M. T. Edgerton, Jr., health officer of Pitt County; Dr. Geo. W. Shipp, county physician of Catawba County and Dr. George M. Cooper, of the State Board of Health. The "County Fight on Typhoid Fever" will be discussed by Dr. M. W. Steele, Assistant in Rural Sanitation, State Board of Health, while "Community Clean-ups" will be the subject of Dr. J. T. Battle, Greensboro.

The evening session will be "The Sick Boy in the Family" by Col. Jas. H. Southgate, Durham; "Fighting the Great White Plague," Dr. H. F. Long, Statesville; and "What the State and You Can Do for the Consumptive," by Dr. Thompson Frazier, Asheville.

Complimentary to this meeting of the State's Health Officers will be the big Health Exhibit held in the Greensboro Chamber of Commerce rooms. This Exhibit will be composed of this State's health exhibit, that of Florida, Georgia and South Carolina, and those of Greensboro and Asheville. This combined exhibition of the health work that is being done in these other Southern States as well as that of our own will be of supreme interest and instruction.

Dr. H. B. Thomas, of Burgaw, N. C., died of pneumonia at his home April 10. He had been a resident of Burgaw about ten years, having moved there from Washington, D. C. He had built up a

good practice there.

Dr. Thomas was born in Washington, June 8th, 1874. His childhood and early youth were spent in New Bern, N. C., and the burial was there. He was educated at the University of North Carolina, the North Carolina Medical College, the Medical Department of Columbia University, and the Columbian, Garfield and Children's Hospitals of Washington. He gave his life strictly to his profession and was recognized as one of the ablest physicians and surgeons in the eastern portion of this State. He leaves a widow, and little girl ten years old.

TENTATIVE PROGRAM OF SIXTY-SECOND ANNUAL MEETING MEDICAL SOCIETY OF STATE OF NORTH CAROLINA, GREENSBORO, TUESDAY, WEDNESDAY, THURSDAY, JUNE 16, 17, 1915, 10.00 A. M.

North Carolina Public Health Officers' Association Fifth Annual Session Monday, June 14, 1915, 10.00 a. m., Greensboro.

Dr. Wm. M. Jones, President, Greensboro.
Dr. D. E. Sevier, Vice-President, Asheville.
Dr. W. S. Rankin, Secretary-Treasurer, Raleigh.

PROGRAM.

Monday, June 14, 1915, 10:00 a. m.

1. Call to Order by Dr. Wm. M. Jones, President.
2. Address of Welcome.—Mayor T. J. Murphy, Greensboro.
3. Response to Address of Welcome.—Dr. Benj. K. Hays, Oxford.
4. President's Address.—Dr. Wm. M. Jones, Greensboro.
5. Report of Secretary-Treasurer.—Dr. W. S. Rankin, Raleigh.
6. Appointment of Committees:
 - (a) Committee on Nominations.
 - (b) Committee on Resolutions.
 - (c) Auditing Committee.
7. Symposium on School Sanitation:
 - (a) "Teaching Sanitation and Hygiene in the Schools by Precept."—Thos. R. Foust, Superintendent of Public Schools of Guilford County.
 - (b) "Teaching Sanitation and Hygiene in the Schools by Example."—Dr. Chas. T. Nesbit, Health Officer of Wilmington and New Hanover County.
8. "The Rural Sewage Problem."—Dr. John A. Ferrell, New York City.

Monday Afternoon, 3:00 o'Clock.

9. Symposium on the Problem of Contagious Diseases:
 - (a) "The First Step: Morbidity Reports: How to Secure."—Dr. Geo. M. Cooper, Chief Bureau of Rural Sanitation, North Carolina State Board of Health.
 - (b) "What to Do with the Reported Disease—The Focus of Infection."—Dr. M. T. Edgerton, Jr., Health Officer of Pitt County.
 - (c) "Rural Disinfection."—Dr. Geo. W. Shipp, County Physician of Cataw-

ba County.

10. "Plan, Machinery, Budget, and Probable Results of County Fight on Typhoid Fever."—Dr. M. W. Steele, Assistant in Rural Sanitation, North Carolina State Board of Health.
 11. "Interesting Communities in a General Community Cleanup."—Dr. J. T. J. Battle, Greensboro.
- Monday Evening, 8:00 o'Clock.**
12. "The Sick Boy in the Family."—Col James Southgate, Durham.
 13. "The First Essential in Fighting the Great White Plague—An Early Diagnosis."—Dr. H. F. Long, Statesville.
 14. "What the State and You Can Do for the Consumptive."—Dr. Thompson Frazier, Asheville.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Officers, 1914-1915.

- Dr. L. B. McBrayer, President, Sanatorium.
 Dr. J. J. Philips, First Vice-President, Tarboro.
 Dr. C. W. Mosely, Second Vice-President, Greensboro.
 Dr. S. M. Crowell, Third Vice-President, Charlotte.
 Dr. John A. Ferrell, Secretary, 61 Broadway, New York City.
 Dr. H. D. Walker, Treasurer, Elizabeth City.
 Dr. J. M. Northington, Orator, Boardman.
 Dr. Mary E. Lapham, Essayist, Highlands.

CHAIRMAN OF SECTIONS.

Section on Surgery:

Dr. Jno. A. Williams, Greensboro.

Section on Physiology and Chemistry:

Dr. Robert Hervey Lafferty, Charlotte.

Section on Materia Medica and Therapeutics:

Dr. Forrest Alphonso Carpenter, Statesville.

Section on Medical Jurisprudence and State Medicine:

Dr. Fletcher R. Harris, Henderson.

Section on Gynecology:

Dr. Elijah Thomas Dickinson, Wilson.

Section on Obstetrics:

Dr. D. A. Garrison, Gastonia.

Section on Pediatrics:

Dr. Lewis W. Elias, Asheville.

Section on Anatomy:

Dr. Hubert H. Haywood, Jr., Raleigh.

Section on Pathology and Microscopy:

Dr. Richard Nixon Duffy, New Bern.

Section on Practice of Medicine:

Dr. Wilbur A. McPhaul, Lumberton.

Section on Hygiene, Sanitation and Preventive Medicine:

Dr. W. J. McAnally, High Point.

Section on Conservation of Vision:

Dr. C. W. Banner, Greensboro.

Dr. Louise A. Merrimon, Asheville.

PROGRAM.

Opening Session, Tuesday, June 15, 1915—10:30 a. m.—Opera House.

1. Call to Order.—Dr. J. T. J. Battle, Chairman, Committee on Arrangements.
2. Invocation.—Dr. Chas. W. Byrd, Pastor, West Market Street M. E. Church.
3. Address of Welcome.—Mayor T. J. Murphy, Greensboro.
4. Response to Address of Welcome.—Dr. Benj. K. Hays, Oxford.
5. President's Annual Address.—Dr. L. B. McBrayer, Sanatorium.
6. Report of Committee on Arrangements.—Dr. J. T. J. Battle, Chairman; Dr. Wm. M. Jones.
7. Report of Reception Committee: Dr. J. W. Long, Chairman.

Dr. John A. Williams.

Dr. W. P. Beall.

Dr. D. A. Stanton.

Dr. Chas. Roberson.

8. Report of Press Committee:

Dr. J. T. J. Battle, Chairman.

Mr. Warren H. Booker.

Mr. Earle Godbey.

PHYSIOLOGY AND CHEMISTRY.

Dr. Robt. H. Lafferty, Chairman, Charlotte.

Subject Unannounced:—Dr. C. S. Mangum, Chapel Hill.

"Physiology of the Heart—Report of a Case—Illustrated."—Dr. J. P. Munroe, Sanford.

Tuesday Afternoon, 2:30 o'Clock.

MEDICAL JURISPRUDENCE AND STATE MEDICINE.

Dr. Fletcher R. Harris, Chairman, Henderson. **SYMPOSIUM ON NARCOTICS:**

"The Relation of the Doctors in North Carolina to State Medicine."—Dr. C. T. Nesbitt, Wilmington.

"State Laws Needed."—Dr. Robt. T. Upchurch, Henderson.

"The Harrison Anti-Narcotic Law and the Duty of the Profession."—Dr. J. Howell Way, Waynesville.

"What North Carolina Should Do in the Regulation of the Sale and Use of Narcotics."—Dr. W. S. Rankin, Raleigh.

"Chemistry of Patent Medicines."—Dr. E. V. Howell, Chapel Hill.

"Patent Medicines versus Prohibition."—Dr. Cyrus Thompson, Jacksonville.

"Should North Carolina Send Her Drug Habitués to the Chain Gang or Give Them Humane Treatment?"—Dr. W. H. Jones, Greensboro.

"Percentage of Crime and Insanity Caused by Narcotics, Including Whiskey; and the Economic Value Accruing to the State Should These Drugs Cease to be Used in the State."—Dr. T. M. Jordan, Raleigh.

"Prevention of Insanity by the Proper Treatment of Whiskey and Drug Habitués."—Dr. Albert Anderson, Raleigh.

"Should the Religious Press Aid and Abet in the Sale of Liquor and Other Narcotics in North Carolina under a Non-de-Plume?"—Dr. J. T. J. Battle, Greensboro.

MATERIA MEDICA AND THERAPEUTICS.
 Dr. Forrest A. Carpenter, Chairman, Statesville.

"Relative Toxicity of Ether and Chloroform in Experimental Nephritis."—Dr. Forrest A. Carpenter, Statesville.

"The Teaching of Pharmacology."—Dr. Wm. DeB. MacNider, Medical Department, University of North Carolina, Chapel Hill.

Tuesday Evening 8:30 o'Clock.

SURGERY.

Dr. John A. Williams, Chairman, Greensboro. **SYMPOSIUM ON CANCER:**

"Sarcoma of the Long Bones."—Dr. J. F. Highsmith, Fayetteville.

"Surgical Side of Cancer."—Dr. J. W. Long, Greensboro.

"Neglect of Visible Lesions—Illustrated."—Dr. Watt Cole, Greensboro.

"Early Diagnosis of Cancer."—Dr. J. M. Wainwright, Chairman, Committee on Health and Public Instruction, Scranton, Penn.

"Calculi of the Genito-Urinary Tract."—Dr. A. J. Crowell, Charlotte.

"Pellagra and Other Changes in Mentality in Surgical and Gynecological Practice."—Dr. W. O. Spencer, Winston-Salem.

"Treatment of a Bone When Amputating Ex-

tremities."—Drs. D. W. and Ernest Bullock, Wilmington.

Wednesday Morning, 9:30 o'clock.

PRACTICE OF MEDICINE.

Dr. Wilbur A. McPhaul, Chairman, Lumberton.
SYMPOSIUM ON TUBERCULOSIS:

"Tuberculosis as a Problem in Schools and Colleges."—Dr. Jas. B. Bullitt, Professor Pathology, Medical Department, University of North Carolina, Chapel Hill.

"The Opportunity of the Medical Profession in the Fight against Tuberculosis in North Carolina."—Dr. P. P. McCain, Assistant Superintendent, North Carolina State Sanatorium for Treatment of Tuberculosis.

"Diagnosis of Tuberculosis by the General Practitioner."—Dr. Chas. O'H. Laughinghouse, Greenville.

"Positive Diagnosis by the X-Ray."—Dr. H. H. Dodson, Greensboro.

"An Experimental Study of the Intraspinous Method of Therapy in Syphilis of the Nervous System."—Dr. Frederic M. Hanes, Richmond, Va.

"Typhoid."—Dr. L. L. Lumsden, U. S. Public Health Service.

"Pyorrhea."—Dr. J. A. Sinclair, Asheville, N. C.

CONJOINT SESSION.

Wednesday, June 16, 12:00 o'clock.

Conjoint Session of Medical Society of State of North Carolina and the North Carolina State Board of Health.

MEMBERS STATE BOARD OF HEALTH.

J. Howell Way, M. D., President, Waynesville.

Richard H. Lewis, M. D., Raleigh.

J. C. Ludlow, C. E., Winston-Salem.

W. O. Spencer, M. D., Winston-Salem.

Thomas E. Anderson, M. D., Statesville.

Chas. O'H. Laughinghouse, M. D., Greenville.

Edward J. Wood, M. D., Wilmington.

A. A. Kent, M. D., Lenoir.

Cyrus Thompson, M. D., Jacksonville.

EXECUTIVE STAFF STATE BOARD OF HEALTH

W. S. Rankin, M.D., Secretary and Treasurer.
C. A. Shore, M.D., Director State Laboratory Hygiene.

Geo. M. Cooper, M.D., Chief, Bureau Rural Sanitation.

J. R. Gordon, M.D., Chief, Bureau Vital Statistics.

Warren H. Booker, C.E., Chief, Bureau Education and Engineering.

ORDER OF BUSINESS

1. Reports of Work Accomplished and Recommendations.
2. Discussions.
3. Election of Officers.
4. New Business.
5. Adjournment.

Wednesday Afternoon, 3:00 o'clock

CONSERVATION OF VISION

Dr. C. W. Banner, Chairman, Greensboro.

"Economics of the Prevention of Blindness."

—Mr. John E. Ray, Superintendent, North Carolina State School for the Blind, Raleigh.

"Prevention of Blindness."—Mr. Gordon L. Berry, New York City.

Wednesday Evening, 8:30 o'clock

1. Report of Committee on Obituaries.

Dr. E. G. Moore, Elm City.

Dr. A. W. Knox, Raleigh.

Dr. M. L. Stevens, Asheville.

2. Essay—"The Present Status of Tuberculosis

Knowledge."—Dr. Mary E. Lapham, Highlands.

3. Oration—"The Internationalized Profession."—Dr. J. M. Northington, Boardman.

Thursday Morning, 10:00 o'clock

HYGIENE, SANITATION, AND PREVENTIVE MEDICINE

Dr. W. J. McAnally, Chairman, High Point.

"Inheritance of Mental Characters."—Dr. H. W. Chase, Chapel Hill.

Subject Unannounced:—Dr. S. S. Coe, High Point.

"Heredity's Relation to Feeble-Mindedness."—Dr. C. B. McNairy, Kinston.

"Rural Hygiene."—Dr. D. C. Absher, Henderson.

GYNECOLOGY OBSTETRICS PEDIATRICS ANATOMY

Dr. Hubert B. Haywood, Jr. Chairman, Raleigh.

Subject Unannounced:—Dr. John E. Ray, Jr., Raleigh.

Subject Unannounced:—Dr. E. C. Judd, Raleigh.

PATHOLOGY AND MICROSCOPY

Membership in the State Society

All members of the component county societies shall be privileged to attend all meetings and take part in all the proceedings of the annual sessions, and shall be eligible to any office within the gift of the Society.

No person who has failed to pay his dues through the secretary of his county society shall be entitled to any rights or benefits of the Society. He has no right to read a paper, to hold office, to receive the printed transactions, to vote, or in any other way participate in the deliberations of the Society.

Sec. 3. No person who is under sentence of suspension or expulsion from any component society of this Society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

Sec. 4. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at the session.

FINANCES

Pay your dues through your county secretary.

Make inquiry to see that your county society is in good standing and its assessment paid. You should see that you are not debarred from the scientific and business deliberations.

Chapter of the State Medical Association:

ASSESSMENTS AND EXPENDITURES

Section 1. An assessment of two dollars per capita on the membership of the component societies is hereby made the annual dues of this Society, which amount shall be collected by the secretary of each county society from each of its members on or before the first day of March and forwarded to the treasurer of the State Society before the first day of April in each year. The secretary of each county society shall forward a statement of its

assessment, together with its roster of all officers and members, list of delegates and list of nonaffiliated physicians of the county, to the secretary of this Society on or before the first day of April in each year.

Sec. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the State Society or of the House of Delegates, or receive the volume of Transactions, until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

ADVANTAGES TO THE DOCTOR OF MEMBERSHIP IN THE STATE MEDICAL SOCIETY

1. The annual Transactions of the State Medical Society afford the only permanent record of the profession in the State.

2. The doctor's posterity may suffer disappointment, knowing he was a doctor, if a search of the records gives no information concerning him.

3. A referee for a life insurance company of this State remarked recently that a doctor had lost nearly one hundred dollars in fees in one summer simply because he had failed to pay his Society dues, and as a result had his name omitted from the list of doctors for his county as published in the Transactions. The insurance companies in rating doctors count good standing in his county and State societies as 50 per cent.

4. To every member of the Society a copy of the annual Transactions is sent, thus giving him a record of the result of the study, research and experience of the other doctors of the State.

5. Social intercourse brings about a better understanding and fellowship.

A county secretary should not have to beg a member to pay his dues or send repeated requests for them.

PAPERS AND DISCUSSIONS

Sec. 4. No address or paper before the Society, except those of the president, orator, and essayist, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

Sec. 5. All papers read before the Society shall be its property. Each paper shall be deposited with the secretary when read, and if this is not done, it shall not be published.

The papers should be typewritten on letter-size or legal-cap paper. Only one side of the paper should be used. The title of the paper, together with the name and address of the author, should be given on the first page. The other pages should be numbered at the top and carry the initials of the author.

"No voluntary paper shall be placed upon the annual program or be heard in the Association, which has not first been read in the county society of which the author is a member."

Sec. 3. The chairman of sections shall send in to the secretary, not later than thirty days previous to each meeting of the Society, the titles of papers to be presented by themselves

and their assistants, to be used by the Committee on Scientific Work in making a program for the meeting.

Sec. 4. No paper shall be read before the Society unless the author be present, unless his absence be due to some unavoidable circumstances. A paper presented by proxy may be referred to the Committee on Publication.

Sec. 5. No paper shall be referred to the Committee on Publication until it has been placed in the hands of the secretary; and the secretary shall not return any paper accepted by the Society without the consent of the Society, and then he shall take a receipt for the same.

Sec. 6. No paper shall be received by or read before this Society that has been presented to any other society, excepting only a component society of this Society, or that has been offered for publication in any journal. In the case of any paper accepted, the author is supposed to have vested with the Society all rights to its ownership.

Sec. 7. No paper shall be published in the Transactions of this Society unless approved by the Committee on Publication; and any paper rejected by said committee shall be returned to the author through the secretary of the Society.

Sec. 8. It is to be understood that the Society is not to be considered as indorsing all the views and opinions advanced by the authors of papers published in the Transactions of the Society.

ELECTION OF OFFICERS

Section 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect: Provided, that when only one name is to be balloted for, the House may suspend the rules and declare the same elected by consent.

Sec. 2. The House of Delegates, on the first day of the annual sessions, shall select a Committee on Nominations, consisting of ten delegates, no two of whom shall be from the same councillor district. It shall be the duty of this committee to consult with the members of the Society, and to hold one or more meetings, at which the best interests of the Society and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the names of one member for the office of president and one member for each of the other offices to be filled at the annual session.

Sec. 3. The report of the nominating committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the general session.

Sec. 4. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

Sec. 5. Any person known to have solicited votes for or sought any office within the gift of this Society shall be ineligible for any office for two years.

BOARD OF COUNCILLORS

Dr. M. M. Saliba, Chairman.
Dr. K. P. B. Bonner, Secretary.

DISTRICTS

First—Dr. J. L. Spruill, Columbia.
Second—Dr. K. P. B. Bonner, Morehead City.
Third—Dr. L. B. Evans, Windsor.
Fourth—Dr. M. M. Saliba, Wilson.
Fifth—Dr. Peter John, Laurinburg.

Sixth—Dr. R. L. Felts, Durham.
 Seventh—Dr. A. J. Crowell, Charlotte.
 Eight—Dr. W. M. Jones, Greensboro.
 Ninth—Dr. D. J. Hill, Lexington.
 Tenth—Dr. Carl V. Reynolds, Asheville.

THE COUNCIL

The council is composed of one councillor from each district. On the last day of the annual session of the Association it shall meet for reorganization and for outlining the work of the ensuing year, and at this meeting shall elect a president and secretary. Through its chairman it shall make an annual report to the House of Delegates. Each councillor shall make an annual report of his doings.

COUNCILLOR DISTRICTS AND OFFICERS

First District.

No organization.
 Currituck, Camden, Pasquotank, Dare,
 Perquimans, Gates, Chowan, Washington,
 Tyrrell, Hyde.

Second District.

President, Dr. W. E. Warren, Williamston.
 Secretary, Dr. K. P. B. Bonner, Morehead City.

Treasurer
 Hertford, Martin, Pitt, Bertie, Beaufort,
 Lenoir, Jones, Craven, Pamlico, Carteret.

Third District.

President
 Secretary
 Treasurer
 New Hanover, Pender, Onslow, Duplin,
 Bladen, Sampson, Columbus, Brunswick.

Fourth District.

President, Dr. E. B. Quillan, Rocky Mt.
 Secretary, Dr. J. C. Grady, Kenly.
 Northampton, Halifax, Nash, Edgecombe,
 Johnston, Wilson, Wayne, Greene.

Fifth District.

President, Dr. J. W. Halford, Lillington.
 Secretary, Dr. A. B. Croom, Maxton.
 Treasurer
 Cumberland, Robeson, Scotland, Richmond,
 Montgomery, Moore, Harnett, Chatham.

Sixth District.

President
 Secretary
 Treasurer
 Wake, Franklin, Warren, Vance, Granville,
 Person, Caswell, Alamance, Orange, Durham.

Seventh District.

President, Dr. J. W. Pemberton, Concord.
 Secretary, Dr. S. K. Thompson, Charlotte.
 Treasurer
 Anson, Union, Stanly, Mecklenburg, Cabar-
 rus, Lincoln, Gaston, Cleveland, Rutherford.

Eighth District.

President, Dr. D. A. Stanton, High Point.
 Secretary, Dr. W. M. Jones, Greensboro.
 Treasurer
 Rockingham, Guilford, Randolph, Forsyth,
 Stokes, Surry, Yadkin, Alleghany, Wilkes,
 Ashe.

Ninth District.

President, Dr. Thos. E. Anderson, States-
 ville.
 Secretary, Dr. A. B. Byerly, Cooleemee.
 Davidson, Caldwell, Davie, Rowan, Iredell,
 Alexander, Catawba, Watauga, Mitchell, Burke.

Tenth District.

President, Dr. L. B. Morse, Hendersonville.
 Secretary
 Treasurer
 Buncombe, Yancey, McDowell, Madison, Hen-

derson, Polk, Haywood, Transylvania, Jackson,
 Swain, Macon, Clay, Cherokee, Graham.

STATE SOCIETY DELEGATES

American Medical Association.
 Dr. John A. Ferrell, New York.
 Dr. I. H. Manning, Chapel Hill.

Alternates:

Dr. A. Brenizer, Charlotte.
 Dr. D. T. Tayloe, Washington.
 South Carolina Medical Association.
 Dr. A. B. Croom, Maxton.
 Dr. J. M. Covington, Wadesboro.
 Dr. W. C. Galloway, Wilmington.
 Dr. W. A. McPhaul, Lumberton.
 Dr. J. A. Anderson, McAdenville.
 Dr. J. T. Burrus, High Point.
 Virginia Medical Association

Dr. E. T. Dickinson, Wilson.
 Dr. J. A. Harrison, Elm City.
 Dr. R. N. Duffy, New Bern.
 Dr. M. Bolton, Rich Square.
 Dr. Chas. O.H. Laughinghouse, Greenville.
 Dr. I. M. Taylor, Morganton.
 Association of American Medical Colleges.
 Dr. J. W. Long, Greensboro.
 Dr. Wm. DeB. McNider, Chapel Hill.
 Conference on Medical Education of the
 A. M. A.
 Dr. Wm. DeB. McNider, Chapel Hill.
 Conference on Medical Legislation of the
 A. M. A.

Dr. John A. Ferrell, New York.

COMMITTEES

SCIENTIFIC WORK:

Dr. Wm. DeB. McNider, Chapel Hill.
 Dr. A. S. Pendleton, Raleigh.

PUBLIC POLICY AND LEGISLATION:

Dr. J. N. Templeton, Cory.
 Dr. James M. Parrott, Kinston.
 Dr. G. G. Thomas, Wilmington.
 Dr. L. B. McBrayer, Sanatorium.
 Dr. John A. Ferrell, New York.

PUBLICATION:

Dr. E. C. Register, Charlotte.
 Dr. J. Howell Way, Waynesville.
 Dr. Wm. Allen, Charlotte.

OBITUARIES:

Dr. M. H. Fletcher, Asheville.
 Dr. A. W. Knox, Raleigh.
 Dr. E. T. Dickinson, Wilson.

FINANCE:

Dr. W. W. Green, Tarboro.
 Dr. C. M. Van Pool, Salisbury.
 Dr. Oscar McMullen, Elizabeth City.

CONSERVATION OF VISION:

Dr. C. W. Banner, Greensboro.
 Dr. Louise Merriman, Asheville.

RECORDS OF THE SOCIETY:

Dr. Jno. A. Ferrell, New York.
 Dr. I. H. Manning, Chapel Hill.
 Dr. J. Howell Way, Waynesville.

HISTORY OF SOCIETY MEMBERS:

Dr. Jno. A. Ferrell, New York.
 Dr. E. G. Moore, Elm City.
 Dr. A. W. Knox, Raleigh.
 Dr. M. L. Stevens, Asheville.
 Dr. D. J. Hill, Lexington.
 Dr. A. J. Crowell, Charlotte.

Dr. Oscar McMullen, Elizabeth City.

CONSTITUTION AND BY-LAWS:

Dr. A. A. Kent, Lenoir.
 Dr. G. T. Sikes, Grissom.
 Dr. F. H. Holmes, Clinton.

BOARD OF MEDICAL EXAMINERS

Meeting, Greensboro, June 8, 1914.
 Dr. J. H. Highsmith, President, Fayetteville.
 Dr. H. A. Royster, Secretary, Raleigh.
 Gynecology, Obstetrics and Embryology—Dr.

J. F. Highsmith, Fayetteville.
 Surgery—Dr. H. A. Royster, Raleigh.
 Anatomy, Histology and Microscopy—Dr. C. T. Harper, Wilmington.
 Practice of Medicine—Dr. J. G. Blount, Washington.
 Pharmacology, Materia Medica and Therapeutics—Dr. J. Q. Myers, Charlotte.
 Chemistry and Diseases of Children—Dr. I. M. Taylor, Morganton.
 Physiology, Pathology and Hygiene—Dr. M. L. Stevens, Asheville.

The Board of Medical Examiners is composed of seven members, elected on the second day in the general meeting, for a term of six years. The next election will be held Wednesday during the 1920 meeting. The Board holds examinations beginning Tuesday of the week preceding the date of the annual meeting of the Society. For 1915 the meeting will be in Greensboro, beginning June 8th.

QUESTIONS FOR THE DOCTORS

Has any physician ever enjoyed a State-wide reputation as a professional man who did not take an interest in and attend the meetings of the State Society?

As a practical proposition, will you lose or gain practice if your patrons know your absence is for the purpose of attending scientific discussions of medical topics?

Is there anything you might learn from other doctors of experience which might increase your efficiency?

Think the matter over. Attend the meeting.

HOUSE OF DELEGATES

First Meeting, Tuesday, June 15, 2 p.m.

..... Officers.

Dr. L. B. McBrayer, President, Sanatorium.
 Dr. Jno. A. Ferrell, Secretary, New York.

The legislative and business body of the Society is composed of the officers of the Society and the delegates. The officers are the president, the three vice-presidents, the secretary, the treasurer and the ten councillors. Each county society which has paid its dues is entitled to one delegate. The large county societies are entitled to one delegate for every twenty-five members in good standing or major fraction thereof. That is, thirty-eight paid members entitles a society to two delegates, and sixty-three members to three delegates. An alternate for each delegate should be elected to serve in the event the delegate elected is absent. No delegate can be seated who has not remitted his dues through the secretary of his county society. The term of office for delegates is two years. No delegate is eligible to the office of president, vice-president, secretary or treasurer.

Sec. 14. The House of Delegates shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the Transactions.

ORDER OF BUSINESS

1. Call to order by the president.
2. Roll call and seating of qualified delegates.
3. Reading of minutes of previous meeting.
4. Reports of officers:
 - (a) Secretary.
 - (b) Treasurer.
 - (c) Chairman Board of Councillors.
5. Report of Standing Committees:
 - (a) Arrangements.
 - (b) Public Policy and Legislation.
 - (c) Publication.
 - (d) Scientific Work.
 - (e) Finance.
 - (f) Obituaries and Memorial Exercises.

(g) Medical Defense.

(h) Collection and Preservation of Records.

6. Report of Special Committees:
 - Constitution and By-Laws, Dr. A. A. Kent, Chairman.
7. Reading of Communications.
8. Reading of Memorials and Resolutions.
9. Unfinished Business.
10. New Business.
11. Election of Nominating Committee. (One from each Councillor District. The committee to nominate the officers and councillors must be named first day.)

COUNTY DELEGATES TO 1915 STATE MEETING

First Regular Meeting, Tuesday, 2 p. m.

Second Regular Meeting, Thursday, 9 a. m.

Alamance:

Delegate, Dr. T. S. Faucette.
 Alternate, Dr. J. J. Barefoot.

Alexander (see Iredell):

Alleghany (see Surry):

Anson:

Ashe (no society):

Avery:

Beaufort:

Bertie:

Delegate, Dr. Frank Garris, Lewiston.

Alternate, Dr. E. H. Horton, Aulander.

Bladen:

Brunswick:

Buncombe:

Delegate, Dr. D. E. Sevier, Asheville.

Delegate, Dr. T. Frazer, Asheville.

Delegate, Dr. I. J. Archer, Black Mountain.

Alternate, Dr. J. M. Lynch, Asheville.

Alternate, Dr. W. P. Herbert, Asheville.

Alternate, Dr. J. E. Cocke, Asheville.

Burke:

Delegate, Dr. I. M. Taylor, Morganton.

Alternate, Dr. John McCambell, Morganton.

Cabarrus:

Caldwell:

Camden (see Pasquotank):

Cartaret:

Caswell:

Catawba:

Chatham:

Delegate, Dr. B. H. Hackney, Bynum.

Cherokee:

Delegate, Dr. C. V. Orr, Andrews.

Alternate, Dr. S. C. Heighway, Murphy.

Chowan-Perquimans:

Delegate, Dr. Edgar Newby, Hertford.

Alternate, Dr. H. M. S. Cason, Edenton.

Clay (see Macon):

Cleveland:

Columbus:

Craven:

Cumberland-Hoke:

Currituck:

Dare (see Pasquotank):

Davidson:

Delegate, Dr. D. J. Hill, Lexington.

Alternate, Dr. C. A. Julian, Thomasville.

Davie:

Duplin:

Durham-Orange:

Edgecombe:

Delegate, Dr. W. W. Greene, Tarboro.

Alternate, Dr. George Mitchell, Macclesfield.

Forsyth:

Franklin:

Delegate, Dr. H. A. Newell, Louisburg.

Alternate, Dr. S. P. Burt, Louisburg.

Gaston:

Delegate, Dr. T. C. Quickel, Gastonia.

Alternate, Dr. J. M. Sloan, Gastonia.

Gates (no society):

- Graham (no society):
 Granville:
 Greene:
 Guilford:
 Delegate, Dr. J. W. Long, Greensboro.
 Delegate, Dr. J. A. Williams, Greensboro.
 Delegate, Dr. W. P. Beall, Greensboro.
 Alternate, Dr. H. H. Dodson, Greensboro.
 Alternate, Dr. W. M. Jones, Greensboro.
 Alternate, Dr. J. F. Burrus, High Point.
 Halifax:
 Harnett:
 Delegate, Dr. H. C. Roberts, Coats.
 Alternate, Dr. J. F. Hicks, Dunn.
 Haywood:
 Henderson-Polk:
 Delegate, Dr. Wm. Redin Kirk, Hendersonville.
 Alternate, Dr. A. B. Drafts, Hendersonville.
 Hertford:
 Hoke (see Cumberland):
 Hyde:
 Fredell-Alexander:
 Delegate, Dr. M. R. Adams, Statesville.
 Jackson:
 Delegate, Dr. C. Z. Candler, Sylva.
 Alternate, Dr. A. S. Nichols, Sylva.
 Johnston:
 Delegate, Dr. L. D. Wharton, Smithfield.
 Alternate, Dr. G. S. Coleman, Kenly.
 Jones (no society).
 Lee:
 Delegate, Dr. J. P. Monroe, Sanford.
 Alternate, Dr. E. M. McIver, Jonesboro.
 Lenoir:
 Lincoln:
 Delegate, Dr. W. G. Bandy, Maiden.
 Alternate, Dr. J. R. Gamble, Lincolnton.
 Madison:
 Macon-Clay:
 Delegate, Dr. S. H. Lyle, Franklin.
 Alternate, Dr. W. A. Rogers, Franklin.
 Martin:
 Delegate, Dr. J. W. Williams, Everetts.
 Alternate, Dr. J. H. Saunders, Williamston.
 McDowell:
 Delegate, Dr. B. L. Ashworth, Marion.
 Alternate, Dr. M. F. Morphew, Marion.
 Mecklenburg:
 Mitchell:
 Montgomery:
 Delegate, Dr. C. W. Armstrong, Troy.
 Alternate, Dr. C. Daligny, Troy.
 Moore:
 Delegate, Dr. H. B. Shields, Carthage.
 Alternate, Dr. M. L. Mathews, Cameron.
 Nash:
 Delegate, Dr. E. B. Quillen, Rocky Mount.
 Alternate, Dr. J. P. J. Battle, Nashville.
 New Hanover:
 Northampton:
 Onslow:
 Orange (see Durham):
 Pamlico:
 Pasquotank-Camden-Dare:
 Delegate, Dr. Oscar McMullen, Elizabeth.
 Alternate, Dr. Isaac Fearing, Elizabeth City.
 Pender:
 Perquimans (see Chowan):
 Person:
 Delegate, Dr. G. M. Gentry, Timberlake.
 Alternate, Dr. W. T. Long, Roxboro.
 Pitt:
 Polk (see Henderson).
 Randolph:
 Delegate, Dr. W. I. Sumner, Randleman.
 Alternate, Dr. T. I. Fox, Franklinsville.
 Richmond:
 Robeson:
 Delegate, Dr. R. D. McMillan, Red Springs.
 Alternate, Dr. T. C. Johnson, Lumberton.
 Rockingham:
 Rowan:
 Rutherford:
 Sampson:
 Delegate, Dr. John D. Kerr, Clinton.
 Alternate, Dr. G. M. Cooper, Clinton.
 Scotland:
 Stanly:
 Delegate, Dr. L. F. Magruder, Albermarle.
 Alternate, Dr. T. A. Hathcock, Norwood.
 Stokes:
 Delegate, Dr. W. B. Moore, Smith, N. C.
 Alternate, Dr. J. Walter Neal, Meadows, N. C.
 Surry-Alleghany:
 Delegate, Dr. J. W. Ring, Elkin.
 Alternate, Dr. R. J. Lovell, Mt. Airy.
 Swain (no society):
 Transylvania:
 Tyrrell (see Washington):
 Union:
 Delegate, Dr. H. D. Stewart, Monroe.
 Alternate, Dr. R. Armfield, Marshville.
 Vance:
 Delegate, Dr. F. R. Harris, Henderson.
 Alternate, Dr. H. H. Bass, Henderson.
 Wake:
 Delegate, Dr. H. McK. Tucker, Raleigh.
 Delegate, Dr. Albert Anderson, Raleigh.
 Alternate, Dr. R. S. McGeachy, Raleigh.
 Alternate, Dr. Z. M. Cayness, Raleigh.
 Warren:
 Washington-Tyrrell:
 Delegate, Dr. W. H. Ward, Plymouth.
 Alternate, Dr. B. F. Halsey, Roper.
 Watauga:
 Wayne:
 Wilkes:
 Wilson:
 Delegate, Dr. Henry B. Best, Wilson.
 Alternate, Dr. L. V. Grady, Wilson, R. F. D.
 Yadkin:
 Yancey (no society):
WORK OF COMMITTEE ON NOMINATIONS
 1. President.
 2. First Vice-President.
 3. Second Vice-President.
 5. Secretary (3 years).
 6. Leader in Debate.
 7. Committee on Scientific Work (three; two besides State Secretary).
 8. Committee on Public Policy and Legislation (three members and the President and Secretary).
 9. Publication (three; two besides State Secretary).
 10. Obituaries (three).
 11. Finance (three).
 12. Chairman of Committee on Arrangements.
 13. Virginia Medical Society (two); South Carolina Medical Society.
 14. Fix time and place of meeting.
 Two members of State Board of Medical Examiners for Nurses will be elected in 1915 to serve for three years. The present representatives of the Society are Dr. A. B. Croom, Maxton; and Dr. J. W. Neal, Monroe. The Board is composed of five members, three of whom are nurses elected by the Nurses' Association.
OFFICERS OF COUNTY MEDICAL SOCIETIES FOR 1915.
 Alamance:
 President, Dr. T. S. Faucette.
 Secretary, Dr. J. J. Barefoot.
 Alexander (see Iredell):
 Alleghany (see Surry):
 President

Secretary	President
Anson:	Secretary
President	Edgecombe:
Secretary	President, Dr. J. C. Raby, Leggett.
Ashe:	Secretary, Dr. J. J. Phillips, Tarboro.
President	Forsyth:
Secretary	President, Dr. E. P. Gray, Winston-Salem.
Avery:	Secretary, Dr. R. L. Wall, Winston-Salem.
President, Dr. T. J. Proffit, Elk Park.	Franklin:
Secretary, Dr. Mary M. Sloop, Crossnore.	President, Dr. R. F. Yarborough, Louisburg
Beaufort:	Secretary, Dr. H. A. Newell, Louisburg.
President	Gaston:
Secretary, Dr. H. W. Carter, Washington.	President, Dr. D. A. Garrison, Gastonia.
Bertie:	Secretary, Dr. Bess V. Puett, Dallas.
President, Dr. P. C. Jenkins, Roxobel.	Gates (no society).
Secretary, Dr. J. L. Pritchard, Windsor.	Graham (no society).
Bladen:	Granville:
President	President
Secretary	Secretary
Brunswick:	Greene:
President	President, Dr. W. W. Whittington, Snow
Secretary	Hill.
Buncombe:	Secretary, Dr. J. M. Harper, Hookerton.
President, Dr. E. B. Glenn, Asheville.	Guilford:
Secretary, Dr. G. S. Tennent, Asheville.	President, Dr. C. W. Mosely, Greensboro.
Burke:	Secretary, Dr. Wm. M. Jones, Greensboro.
President, Dr. E. B. Watkins, Morganton.	Halifax:
Secretary, Dr. W. R. Griffin, Morganton.	President, Dr. J. A. Collins, Enfield.
Cabarrus:	Secretary, Dr. A. S. Harrison, Enfield.
President	Harnett:
Secretary	President, Dr. J. W. McLean, Godwin.
Caldwell:	Secretary, Dr. Wm. P. Holt, Duke.
President	Haywood:
Secretary	President, Dr. J. H. Meases, Canton.
Camden (see Pasquotank).	Secretary, Dr. J. R. McCracken, Waynes-
Carteret:	ville.
President	Henderson-Polk:
Secretary	President, Dr. E. McQueen Salley, Hender-
Caswell:	sonville.
President	Secretary, Dr. E. Pierre Mallet, Hender-
Secretary	sonville.
Catawba:	Hertford:
President	President
Secretary, Dr. George W. Shipp, Newton.	Secretary
Chatham:	Hyde:
President, Dr. B. W. Hickey, Bynum.	President
Secretary, Dr. H. T. Chapin, Pittsboro.	Secretary
Cherokee:	Iredell-Alexander:
President, Dr. N. B. Adams, Murphy.	President, Dr. F. A. Carpenter, Statesville.
Secretary, Dr. J. N. Hill, Murphy.	Secretary, Dr. J. E. McLaughlin, States-
Chowan-Perquimans:	ville.
President, Dr. J. H. McMullen, Edenton.	Jackson:
Secretary, Dr. H. M. S. Cason, Edenton.	President, Dr. A. A. Nichols, Sylva.
Clay (see Macon):	Secretary, Dr. Ed. J. Bryson, Cullowhee.
Cleveland:	Johnston:
President	President, Dr. J. C. Grady, Kenly.
Secretary	Secretary, Dr. Oscar Eason, Princeton.
Columbus:	Jones (no society).
President	Lee:
Secretary	President, Dr. W. A. Monroe, Sanford.
Craven:	Secretary, Dr. Lynn Melver, Sanford.
President	Lenoir:
Secretary	President
Cumberland-Hoke:	Secretary
President, Dr. R. B. Hayes, Fayetteville.	Lincoln:
Secretary, Dr. R. L. Pittman, Fayetteville.	President, Dr. L. A. Crowell, Lincolnton.
Currituck:	Secretary, Dr. C. D. Thompson, Lincolnton.
President, Dr. Stuart Mann, Moyock.	Macon-Clay:
Secretary, Dr. W. W. Griggs, Poplar Branch	President, Dr. S. H. Lyle, Franklin.
Dare (see Pasquotank):	Secretary, Dr. W. A. Rogers, Franklin.
Davidson:	Madison:
President, Dr. C. A. Julian, Thomasville.	President, Dr. S. B. Wood, Spring Creek.
Secretary, Dr. C. M. Clodfelter, Lexington.	Secretary, Dr. Oscar O. Miller, Stackhouse.
Davie:	Martin:
President	President, Dr. B. L. Long, Hamilton.
Secretary	Secretary, Dr. Wm. E. Warren, William-
Duplin:	ston.
President	McDowell:
Secretary	President, Dr. D. M. McIntosh, Old Fort.
Durham-Orange:	

Secretary, Dr. J. F. Jonas, Marion.	President, Dr. J. H. Ellington, Sandy Ridge.
Mecklenburg:	Secretary, Dr. W. V. McCauless, Danbury.
President, Dr. J. H. Tucker, Charlotte.	Surry-Alleghany:
Secretary, Dr. Otho B. Ross, Charlotte.	President, Dr. J. B. Smith, Pilot Mt.
Mitchell:	Secretary, Dr. H. B. Rowe, Mount Airy.
President	Swain (no society).
Secretary	Transylvania:
Montgomery:	President, Dr. C. W. Hunt, Brevard.
President, Dr. A. F. Thompson, Troy.	Secretary, Dr. E. S. English, Brevard.
Secretary, Dr. C. Daligny, Troy.	Tyrell (see Washington).
Moore:	Union:
President, Dr. M. L. Matthews, Cameron.	President, Dr. R. L. Payne, Monroe.
Secretary, Dr. J. H. Matthews, Vass.	Secretary, Dr. H. D. Stewart, Monroe.
Nash:	Vance:
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Miscellaneous.

Saratoga Springs as a Substitute for the European Spas.

The great therapeutic value of the waters of Saratoga Springs has become more generally recognised since the Springs have been under the administration and regulation of the State Government, who has equipped the Spa with all the latest appliances to render Saratoga one of the finest of the world's health resorts.

And now that the European Spas, such as Wiesbaden, Marienbad, Kissingen, Nauheim and others are not easily accessible, physicians will find an excellent substitute for their patients among the varied waters of Saratoga Springs, where the Nauheim bath system and many others are carried out with a high degree of efficiency.

Correspondence concerning the waters and the facilities is cordially invited by the Superintending Director for the Commissioners of the State Reservation at Saratoga Springs, N. Y. ad-9-15.

Hospitals and Pensions for Krupps' Employees.

In such a dangerous business as that of Krupps' there has to be provision for quick and adequate care of the injured and disabled, and this department is very efficient. The Convalescent Home, which adjoins the Old People's Colony, is one of the most charming places of the kind I have anywhere seen. The gardens stretch down to the Rhur terrace overlooking the valley. All around are places for games and exercises, and the injured workmen sit about playing games or reading their newspapers. The food and medical attention are of the very best, which is only just, as nearly all the men have suffered terrible injuries in the works. One poor lad with whom I spoke had had both legs broken. Another had suffered terribly while working with a powerful explosive.

Fortunately for the workmen, and perhaps for the employers, there is in Germany compulsory insurance of all working people. The scheme provides that in any case the employee who is ill or injured must be cared for out of the insurance funds. The Krupp firm, however, has improved upon the national system, and has provided a system of its own which enables it to give considerable further assistance to its employees. They pay a workman whose annual wages are 1200 marks, and who has served thirty years, 660 marks per year as an old-age pension. The government pension is at present not more than 150 marks,—this the workman gets in addition to his Krupp pension.

Krupps are obliged to pay into the government pension fund about \$46,000 a year. In order to increase the benefits of their own funds they have at various times contributed large sums of money. There are other funds established among the workmen, and the workmen's aid fund, established a few years ago, was endowed with one million marks. This is a supplementary fund for those disabled before being entitled to an old-age pension, or in case of death to assist the widows and orphans.—From "The Krupps' Model Town," by Robert Hunter, in the American Review of Reviews.

OLO is a petroleum product in the highest degree of refinement ever attained. Absolutely tasteless, colorless, and odorless as distilled water. This has only been made possible by recently improved methods of re-refinement, used exclusively in this preparation. That it may

have a little characteristic taste, a slight flavor of cinnamon is added. It is not absorbed in the stomach or intestines, every drop passing from the bowels just as it was swallowed. It cannot be decomposed or changed by anything with which it may come in contact in the stomach or bowels. It simply lubricates and soothes, by the latter healing irritated mucous surfaces. It also inhibits fermentation and putrescence by smearing the individual bacteria and so preventing their ability to take in air or nourishment—their life necessities. Possessing these qualities, the great medicinal value of OLO is at once indicated. There is probably no condition and no dose in which it can cause ill effect. As a lubricant, it renders the stomach and intestinal contents slippery, and so prevents too long retention of stomach contents before passing into the bowel. With the bowel contents intimately intermingled with a little of this oil, a reduced power of peristalsis (forward wave motion of the bowel) will be made sufficient to carry the contents onward through the bowel with comfort, ease, and proper speed, thus overcoming constipation in the most ideal way. By this means all strong and irritating cathartics can be avoided, and the normal power of the bowel gradually regained. By its emollient and bacteria-destroying properties, all irritations and inflammations within the intestinal canal may be treated most agreeably and successfully. It is the most ideal remedy for correcting the constipation of infants of any age—from one day on. When salol is dissolved in OLO (by gentle heat) and administered, and the oil reclaimed after passing through the bowel, it will be found to contain the separated constituents of salol—phenol and salicylic acid—and some salol. Thus these effective antiseptics may be presented to the entire intestinal tract, including the rectum. Intestinal ulceration in any part from typhoid or other cause may be thus reached and successfully treated. Although seemingly incongruous, OLO is most effective in curing both constipation and diarrhoea by reason of its peculiar properties as here stated.

The usual dose is from half a teaspoonful for young infants, to one or two tablespoonfuls for adults, from one to several times a day, as may be found required for relief of condition treated. It may be given alone or with a little water, coffee, grape-juice, wine or other palatable associate, according to fancy. ad-9-15

There are a few specific medicines. Thyroids is one of them. To get Thyroid effects, however, reliable Thyroids should be employed. The physicians should insure his patient and himself by demanding Armour's when prescribing Thyroids. Armour's Thyroid products are made from selected fresh material. The glands are carefully dried at a low temperature. The powder is analyzed and made to run uniformly 0.2 per cent of iodine in thyroid combination. Physicians interested in the standardization of thyroids should write to Armour and Company for reprint of Articles by Seidell of the Hygienic Laboratory and Fenger of the Armour Laboratory, who worked in conjunction. Armour and Company supply Thyroids in powder, 2-grain, 1-grain $\frac{1}{4}$ -grain Tablets. ad-9-15

An Ally Worthy of Confidence.

It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastro-intestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way. ad-8-15

Bromidia and the Harrison Act.

In as much as Bromidia (Battle) has no opiate content whatever, it is not necessary to make use of the conditions of the Harrison act in prescribing it. In using Bromidia (Battle) the physician can order it just as he always has done. In this connection, we may add that by means of Bromidia (Battle) the physician is enabled to secure a well balanced and carefully compounded bromide preparation, possessing marked advantages over one extemporaneously prepared. ad-8-15

MINOR SURGERY:—In Minor Surgery the application of CAMPHO-PHENIQUE insures antiseptics and promotes healthy granulation. It is an ideal preparation for use in emergency cases, and in the treatment of cuts, boils, carbuncles, burns, bruises, sprains and gunshot wounds. In these latter cases it re-

duces the danger of tetanus. In fact, wherever there is liability of blood infection from any cause, CAMPHO-PHENIQUE is the preparation indicated.

That Tired Feeling.

The reason many persons complain of that "tired" feeling is to be found in a deficiency of blood elements. With the blood stream thin the tissues do not receive a normal supply of nourishment and muscular energy is quickly dissipated—wherefore the tired condition. It is in just such a state that the nourishing properties of Cord. Ext. 01. Morrhuæ Comp. (Hagee) exert their maximum effects. It furnishes nutriment to the tissues, and that is the prime need in honestly tired people. ad-8-15

Send for the Soap.

Physicians who receive that interesting little journal Therapeutic Notes, published bi-monthly by Parke, Davis & Co., will find in the current issue a post-card authorizing the recipient to send for a free cake of Germicidal Soap, P. D. & Co. The writer of this paragraph hopes there will be a general acceptance of the invitation. Take advantage of the offer—send in the card—for Germicidal Soap, P. D. & Co., is no ordinary soap, no ordinary germicide.

Germicidal Soap, P. D. & Co., the body of which is prepared from pure vegetable oils, is at least five times stronger than bichloride of mercury in germicidal power. On test a one-per cent. solution (1-5000 mercuric iodide has been found to destroy pus-producing micro-organisms in less than five minutes whereas a solution of mercuric chloride of the same strength required from fifteen to sixty minutes to accomplish the same result.

When neutral soaps are dissolved in water they are gradually decomposed, liberating free alkali. In the case of Germicidal Soap, P. D. & Co., the free alkali, in proper amount, increases the germ-killing power of the mercuric salt very greatly, because it prevents coagulation of albumen, and allows intimate contact of the germicide with the infected tissues. This soap does not attack steel or nickeled instruments or utensils, as many antiseptics do.

Germicidal Soap, P. D. & Co., is useful for sterilizing hands, instruments, and site of operation; also for lubricating sounds, specula, etc. It serves well as a disinfectant wash after attendance upon communicable diseases, also in certain surface lesions attended with fetid dis-

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charge and skin infection of parasitic origin.

Many physicians direct the use of Germicidal Soap, P. D. & Co., for cleaning minor wounds, as a deodorant in hyperidrosis with offensive odor, for cleansing the scalp and checking dandruff, for treating pustular acne and furuncles, for the preparation of vaginal douches, and for ridding household pets of fleas and lice.

Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections,

but especially those of the gastro-intestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

ad-8-15

Etiology and Prevention of Rickets.—

Curle (in The London Practitioner) says that an important requirement is larger and less closely packed dwellings. Proper feeding can, to some extent, counteract the bad effects of impure air, and more exact rules of feeding must in future be the law. Children at the breast must be fed at regular intervals, for too frequent feeding means overfeeding; when that happens the milk sugar of the maternal milk is absorbed in excessive quantity, to the rejection of fats and proteids. When artificial feeding must be

In Treating Children's Diseases

—especially during recovery from the exanthemata, also whooping cough, mumps, etc.,

Gray's Glycerine Tonic Comp.

is an exceedingly useful remedy. It stimulates the appetite, promotes food assimilation, and by overcoming constitutional depression, increases vital resistance. Its palatability and clean bitter taste make it unusually acceptable to children. The effects that follow are prompt and positive, convalescence is shortened and the dangers of unpleasant sequelae are reduced to a minimum.

The dose should range from one-half to one teaspoonful in water before meals

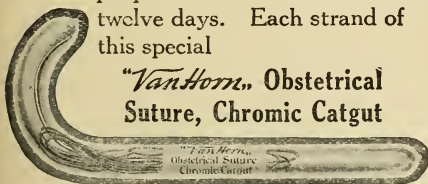
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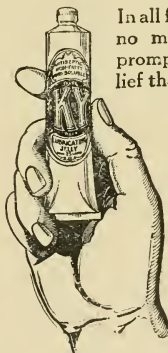
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Heroic dosage is necessary to stimulate the resistive forces of the body and produce the anti toxic effect essential to recovery. Doses of 60 to 100 minims every hour or two are not unusual; improvement in the temperature, pulse and respiration is the only guide.

Treatment along these lines has saved many an otherwise hopeless case. The secret of success has simply been "dosage to effect."

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resorted to, our studies clearly indicate that milk sugar, or cane sugar, must be kept short of excess. The rule must, therefore, be: "With carbohydrates, underfeed;" using as a control, sweating when asleep. "With proteids, in this case, cow's milk, feed up to what the digestive organs of the infant can bear;" using as a control, the appearance and disappearance of undigested casein in the motions. "With fats, in this case cream, overfeed as much as the infant can comfortably stand," using a control, diarrhea. When we overfeed with carbohydrates, we throw a strain upon the lungs, which, in the infant, are weak and will fail to sustain it; when we overfeed with proteids, we throw the strain upon the kidneys, which, in the infant, are, in proportion to the body weight, relatively much stronger than in the adult; and when we overfeed with fats, we usually do neither, for any excess is not assimilated but will pass out in the feces and help to prevent constipation. In carrying out our first rule of underfeeding with carbohydrates, and determining the amount of milk sugar to give daily, since cow's milk and cream contain approximately 20 grains to the ounce, and human milk 30 grains, when diluting cow's milk for infant feeding we must add 10 grains of milk sugar for every ounce of milk or cream used,

and 30 grains for every ounce of water used. An infant a day old having ten feeds, each consisting of milk 1-2 ounce, cream 1-4 ounce, milk sugar approximately 30 grains, water 3-4 ounce, consumes daily 450 grains; at seven days, ten feeds, 2 ounces each, 600 grains; at nine months, four feeds daily, 8 ounces each, 960 grains; and at ten and one-half to twelve months, four feeds daily, 9 ounces each, 1080 grains per day. On these quantities Curle has never found a child, in pure air, to show symptoms of rickets. 925 grains of carbohydrate is given in the Munich table as the daily minimum for a child, from one to one and one-half years of age, some requiring more; our formula is, therefore, a practical one. When more fat is necessary than is given in the milk mixture, butter rolled into balls the size of a 5-grain pill, by means of milk sugar, is quite safe and to the infant, agreeable. From twelve to twenty or more may be given in a day. In the treatment of rickets, beyond the occasional use of small doses of calomel, gray powder or castor oil, to clear the bowels of decomposing food, and assist in reducing the hyperhydremia, drugs are quite unnecessary.

A Small Muscle-Splitting Incision for the Exposure of the Pelvic Portion of the Ureter.—Kidd (The London Lancet) calls attention to the many conditions which call for the exposure of the pelvic portion of the ureter and enumerates some of the various methods of approach that have been used, such as the vaginal, vesical, rectal, perineal, parasacral, intra- and extraperitoneal inguinal and ilio-lumbar routes. The doctor further states that most authorities are now agreed: (1) the exposure should be extraperitoneal; and (2) an incision somewhat on the lines of Sir Astley Cooper's incision for the exposure of the external iliac is the type of incision to aim at. He then says: "The incisions usually advocated are needlessly large and as the wound has to be drained it is clear that there is considerable risk of ventral hernia. Many of the subjects of ureteric stone are young men in the prime of life, and it is not good surgery to condemn such men to a ventral hernia if it is possible to avoid it."

In his operation the patient is anaesthetized, preferably by stovaine spinal anaesthesia, and placed in the Trendelenburg position. An incision is made through the skin and superficial fascia two fingers' breadth above and parallel

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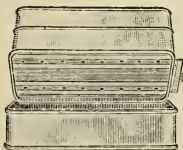
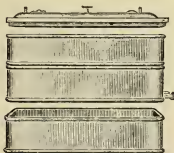
The stand of the sterilizer is steel, covered with enamel that has been baked onto the steel by a tremendous heat, giving a finish that will stand the hardest wear. The table top is of acid proof white porcelain. The sterilizers are of solid rolled copper, heavily nickel plated.

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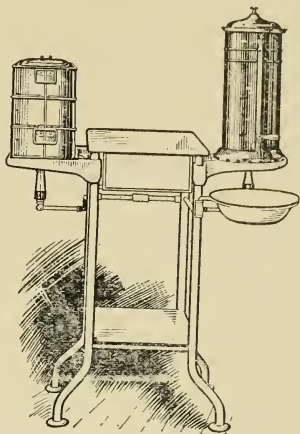
We show here two illustrations of the Combination Instrument and Dressing



Sterilizer, but have not the space to explain in detail the new and novel construction that makes it efficient. You can fill the compartments with instruments and dressings and know with certainty that the contents will be completely and thoroughly sterilized.

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to Poupart's ligament. It is three inches long, and should extend from the edge of the rectus muscle two inches outward and one inch inwards. The center of the incision lies vertically above the internal abdominal ring. The external oblique aponeurosis having been recognized and cleared of fat, the incision is carried through it in the direction of its fibres one inch inwards in front of the rectus and two inches outward from that muscle. The cut edges of the external oblique aponeurosis are retracted so as to expose the internal oblique muscle and its sheath, the fibres of which at this point are horizontal or run slightly inwards and upwards and in the same direction as the fibres of the transversalis muscle. The incision is now carried through these two muscles in the direction of their fibres two inches outwards from the outer edge of the rectus and one inch inwards through the anterior sheath of that muscle. The edge of the rectus muscle is thus clearly exposed and the muscle belly must now be separated from the posterior sheath and retracted inwards. The deep epigastric vessels can then be seen. A finger placed just external to and above the point where these vessels enter the rectus sheath tears through the transversalis fascia into the layer of retroperitoneal fat, the fascia then being divided with a blunt pointed bistoury for the full length of the wound. The peritoneum is then separated from the wall of the iliac fossa and pelvis. In the male the first structures encountered on the back wall of the fossa are the vas deferens, which should be cleared and retracted downwards and inwards, and the spermatic vessels, which should be cleared and retracted upwards and outwards. In the female the ovarian vessels and round ligament correspond to these structures and should be treated in the same manner. The external iliac artery, easily recognized by its pulsation, is now cleared and followed up until the internal and common iliac arteries are likewise cleared. The ureter crosses the brim of the pelvis over the external iliac artery and runs down the side wall of the pelvis parallel to and just in front of the internal iliac artery; and as it is attached to the peritoneum it tends to be stripped inwards and upwards with this. The ureter is exposed at the point where it crosses the external iliac and cleared from its bed for two or three inches above and below this point. A blunt hook is then passed beneath the ureter and it is brought forward while two

stitches of fine chromic catgut are inserted at points above and below to act as retractors. After the conditions calling for operation have been properly dealt with the incision in the ureter is closed by two layers of sutures and the wound of the abdominal wall closed layer by layer with drainage provided for by means of a small strip cut from a rubber glove carried down to the site of the wound in the ureter and brought out at the edge of the rectus muscle, its early removal allowing practical primary union of the entire wound.

The Nerves of the Ovary with Particular Reference to the Interstitial Gland.—

Wallart (*Zeitschr. f. Geburtsh. u. Gynak*) presents an extended study conducted on human ovaries obtained at operation as well as on those from rabbits, guinea-pigs, cats, dogs and cattle. He calls attention to the following points: The entrance of the nerves into the ovary occurs at the hilus between the vessels. From this point the larger number of the nerve bundles find their way to the cortex after giving off numerous branches to the vessels and muscles, whereas isolated nerve tracks do not give off any branches and do not diminish in size. In the cortex a thick plexus of fibers are found, some of which are provided with medullary substance and others are free from the same. The ovarian vessels are more plentifully supplied with nerves than is the case in any other parenchymatous organ and the musculature is equally well provided for. Neither in the human subject nor in the animals was it possible to demonstrate a penetration of the nerves between the cells and the glandular layer to the follicles. The corpus luteum at the time of its maximum development is poorly supplied with nerves but during the stage of retrogression is, on the contrary, very freely supplied. The interstitial gland in the human subject, as well as in many animals, shows a remarkably large number of nerve plexuses at all times, from which it may be concluded that the interstitial gland of the ovary is present as a factor in the organism which brings about a close relation between the ovary, both through nervous and organic relations to the remaining organs. At the same time no definite conclusions can be drawn as to the nerve endings in the ovary but it is very probable that most of the nerve fibers are terminated in the stroma with the development of any particular end organ.

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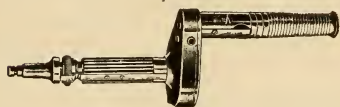
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ad-6-15

Victor Improved Bone Surgery Handpiece.



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The tremendous strides which have been made by eminent surgeons throughout the world in surgery of the bone, particularly in resection and transplantation, and the consequent demand for better and more practical instruments, are responsible to a great extent for the introduction of this improved type of handpiece.

The Victor Improved Bone Surgery Handpiece will find special favor in the operation of the various types of circular bone saws, the principal points of advantage being:

1st. The cutting torque or power of the saw, burr, drill, or trephine, when this improved handpiece is used with the Victor engine, is increased four times, or in other words, the torque of the improved handpiece is four times greater than that of the older type of Victor Handpiece.

2nd. The motor and flexible cable when the improved handpiece is used, may be run at a much higher speed than formerly, this factor eliminating the "back lash" of cable, while on the other hand the actual speed of the cutting instrument itself has been reduced in inverse proportion to the increased torque—all of this is done in the handpiece—with the result that all danger of burning the bone is eliminated—no water or any other cooling medium being required.

3rd. "Buckling" of the cable is almost next to impossible, regardless of the diameter of the saws used or manual pressure applied by the surgeon.

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piece permits of the most aseptic surgery, it being quickly and easily detached from the cable for sterilization.

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6th. The design is unique on account of the off-set, the advantage of this feature being that the "cable" part of the apparatus clears the retractors, etc., in working about the fleshy parts of the body.

Further particulars may be had by addressing Victor Electric Company, Jackson Boulevard & Robey Streets Chicago.

ad 7-15

Auto-Intoxication.

Sir Andrew Clark called attention to and laid great stress upon auto-intoxication, as an important, but frequently unsuspected cause of disease. At the present time the important role it plays is more generally recognized. Successful treatment involves not merely a single flushing of the alimentary tract, but an elimination of toxins already absorbed. Goutiness, also the common hepatic and biliary disorders, are in most cases merely the cumulative effects of intestinal auto-intoxication.

Pluto Water, well diluted in hot water acts almost as a true specific in such conditions. It is also admirable in the treatment of uric acid diathesis, and other therapeutically troublesome stages of chronic rheumatism. Samples, clinical data analysis and literature descriptive of the hygienic methods employed in bottling Pluto will be promptly forwarded on application to The French Lick Springs Hotel Company, French Lick, Indiana.

ad 7-15

The Recovery From Typhoid.

In spite of the improvements in general sanitation, typhoid fever still continues to exist, and is especially prevalent during the fall and early winter months. It is more than probable that most cases occurring in the larger cities are the results of infections contracted at the summer vacation resorts, where the water and food supplies are not as carefully safe-guarded as in urban communities. Although many forms of treatment, designed to abort or cut short the disease, have been advocated from time to time, it is indeed doubtful whether such regulation of the infection has ever been accomplished. As the average course of

Typhoid is from four to six weeks, it is scarcely to be wondered at that the patient usually emerges from the attack in a generally devitalized condition. This is accounted for not only by the general toxemia incident to the bacillary infection, but also because the practically exclusive milk diet generally adopted deprives the patient of the natural food iron which ordinarily maintains the ferric sufficiency of the blood. Some degree of anemia is therefore almost always in evidence when convalescence is first established. The quickest and safest way to overcome this blood deficiency and to hasten revitalization and a return to the normal, is to give Pepto-Mangan (Gude) regularly and in full dosage. This thoroughly agreeable and acceptable hematic tonic is particularly serviceable in typhoid convalescence, because it does not irritate or disturb the digestion, nor induce constipation. ad 7-15

Appendicitis and Major Surgery:—The most important use to which CAMPHO-PHENIQUE can be put is in connection with surgical operations of all kinds. Its powerful antiseptic and germicidal properties give it especial value in such cases. The more delicate the operation, the more necessary it is to employ an absolutely pure and efficacious antiseptic to insure a proper healing process after the operation is completed. This is the chief reason why CAMPHO-PHENIQUE will always be found at the hand of skilled surgeons in many of the hospitals in this country, and also in all their operations in private practice. It is dependable in any and all cases, from amputations and appendicitis to the superficial operations in minor surgery.

Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying result that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastrointestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are

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In cases of faulty elimination causing severe auto-toxemia there is no remedy that will give more prompt and positive effects than

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Unlike the potassium or other salts of iodine, this preparation has no harmful action on the kidneys. On the contrary, elimination of toxic products from the kidneys—as well as from the skin—is promoted without the slightest irritation or injury.

Dosage of Soluble Iodine should be "pushed to effect"; if this is done and coincidentally the bowels slightly stimulated, the practitioner will be highly gratified to note how rapidly and effectively he can overcome even the most severe cases of auto-intoxication.

For valuable clinical information on dosage of iodine, address

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brought about through restoring the physiologic balance of the whole organism.

Alcresta Ipecac in Amebic Dysentery and Pyorrhea.

For many years ipecac has been held by most practitioners to be the remedy par excellence in amebic dysentery. It has repeatedly fallen into disrepute due solely to its intensely nauseating properties. Many expedients to surmount the obstacles in giving the drug have been tried; however, it was not until Alcresta Ipecac, Lilly, was discovered that a combination of the alkaloids of ipecac for oral administration was possible.

Alcresta, a form of hydrated aluminum silicate which is insoluble, when added to a neutral or faintly acid solution of alkaloidal salts will immediately absorb the latter and carry them down with the precipitate. The alkaloids can then be released only in the presence of alkalis. This precipitate is Alcresta Ipecac which is supplied in tablet form, each tablet containing the active principles of 10 grains of Ipecac, U. S. P. These tablets pass through the mouth and stomach without liberating the alkaloids, but as soon as the alkaline secretions of the intestines come in contact with Alcresta Ipecac, the alkaloids are liberated.

The well-known researches of Vedder and Rogers have proven the specificity of ipecac in amebiasis; and Alcresta Ipecac, Lilly, overcomes the difficulty surrounding the oral administration of the drug in this disease.

Bass and Johns of New Orleans were the first to advocate Alcresta Ipecac in the treatment of Pyorrhea Alveolaris, shortly after the announcement of Barrett and Smith that a protozoan—*Endamebas Buccalis*, and perhaps other species of endamebas, was the causative agent in this extremely prevalent malady.

Thus Alcresta Ipecac has come into widespread use by both physicians and dentists everywhere and since it has been clearly demonstrated that pyorrhea is frequently the underlying cause of many other systemic disorders and that, according to good authority, fully 95 per cent. of the adults over thirty years of age have pyorrhea, it will readily be seen that the possibilities of this new compound are very great. ad-7-15

Treatment of Persistent Inaccessible Hemorrhage.

Every physician feels the need occasionally of a reliable agent in persistent

hemorrhage that is inaccessible to the ordinary modes of treatment. Coagulose meets that want—meets it better, it is believed, than any agent hitherto employed for the control of hemorrhage due to defective coagulation of the blood. Coagulose is prepared in the biological laboratories of Parke, Davis & Co., from normal horse serum. It is administered hypodermatically (subcutaneously).

The directions for preparing Coagulose for use are as follows: Add to the powder in the bulb 6 to 8 Cc. of sterile water, the temperature of which should not be above 98 degrees F. Introduce the water into the bulb through the needle of a 5-Cc. syringe. The rubber stopper should then be replaced and the bulb immediately shaken, continuing the agitation three or four minutes or until the powder is completely dissolved.

To fill the syringe, invert the bulb and remove the rubber stopper from its mouth. Insert the needle of the syringe into the solution in the inverted bulb and draw the fluid into the syringe.

By inverting the bulb before inserting the needle, one avoids the likelihood of drawing the foam or bubbles (caused by agitating the liquid in the bulb) into the syringe, as the foam will rise to the top of the solution, leaving the field for the insertion of the needle perfectly clear.

ad-7-15

The Selection of an Alternative.

The value of the class of remedies usually described as alternatives, is unquestioned, and the main point involved is the selection of one. The facts to be taken under consideration in disposing of this point are degree of therapeutic effectiveness and palatability. The qualities of the ideal alternative are combined in IODIA (Battle) in large measure, for which reason it has acquired a favorable reputation in late syphilis, rheumatism and other states indicating the use of alternative drugs. ad-7-15

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functioned ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory relief from the distressing symptoms that call

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One of the most efficient, most
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most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vasomotor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation. ad-7-15

The Arrest of Tuberculosis.

Great interest has been aroused recently among medical men by the reports of the splendid results being obtained in the treatment of tuberculosis, even in the later stages, by so-called "intensive use of iodine." Thus far the great bulk of this work has been done abroad, but for some time in this country quite a good many practitioners have also been applying this line of treatment with results no less striking and positive.

As a matter of fact, much impetus has been given to the proposition in the United States by the availability of Burnham's Soluble Iodine, an iodine preparation that is especially adapted to meet the requirements of the "intensive method." These requirements are essentially (1) the use of large doses, (2) for long periods and (3) without toxic or harmful effect. Many and various were the iodine salts and products tested, but all proved disappointing in one way or another with the exception of Burnham's Soluble Iodine. Careful conservative trials showed that this preparation was indeed soluble, that it was free from the irritating action of other iodine products, and could be given in exceptionally large doses without disturbing the digestion or producing toxic effect. It was evident, therefore, that Burnham's Soluble Iodine, by virtue of its rapid and uniform absorption and that freedom from toxicity, could be administered in a dosage never before possible with the ordinary iodine compounds. As a consequence, the clinician has been able to use this preparation in tuberculosis in quantities that assured the full physiologic effects of iodine with a pronounced

counteraction of the toxins, an activation of the nutritional processes, an increase in the elimination of waste products, and a marked stimulation of phagocytosis. Boudreau claims that the intensive iodine treatment has a profound stimulating influence on all of the internal secretions, a result that is in effect an indirect, or auto organotherapy. The action of Burnham's Soluble Iodine on all glandular functions and the marked impetus given to bodily metabolism would seem to substantiate this conclusion.

For the first few days after beginning the use of Burnham's Soluble Iodine there is little or no appreciable effect; in fact, there may be a slight increase in certain symptoms due to the reactions set up, and the initial stimulation of elimination. In a few days, however, the beneficial effects of the treatment appear, the temperature drops perceptibly, the cough decreases, and sputum steadily becomes more mucous and rapidly diminishes in amount. The night sweats grow less, insomnia is relieved, and the other symptoms show corresponding improvement. The appetite soon increases, the digestion improves and a progressive gain in weight is noted. Gradually the physical signs show a change for the better and the patient's whole condition is substantially improved.

In conclusion, it can be stated without exaggeration that no remedy being used today in the treatment of tuberculosis holds such remarkable possibilities as Burnham's Soluble Iodine. The whole situation may be summed up in the statement that just as iodine is the logical remedy for all tuberculosis conditions, so is Burnham's Soluble Iodine the logical form in which to administer it.

A valuable little treatise recently prepared on "The Arrest of Tuberculosis" gives very explicit advice concerning the successful application of the "intensive iodine treatment of tuberculosis." Sent free to physicians on request. Address Burnham Soluble Iodine Co., Auburn-dale, Mass. ad 7-15

Sander's Eucalyptol.

Sander's Eucalyptol is characterized by Mr. De Bayay, the eminent analytical chemist of Melbourne, as comparing with the commercial eucalyptus products as well refined and matured brandy compares with raw spirit. Not only does the primary distillation from the selected leaves of the best species give it a unique position, but the fact of it containing a

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on the gums rapidly reduces the
inflammation and conserves the little
one's comfort.

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ad 7-15

The Course of Labor in Contracted Pelves.—Nebesky (Arch. f. Gynak.) has studied the course of labor in narrow pelvis in the cases delivered in the Innsbruck Clinic during the last fifteen years with particular reference to Cesarean section. During this time 15,998 women were confined, among which were 1673 cases of contracted pelvis, or about 10.5 per cent. Leaving out of consideration seventeen cases of miscarriage, there were 1302 spontaneous labors; whereas, operative delivery was necessary in 365 cases (21.9 per cent.). There were five maternal deaths including two from sepsis, one each from pneumonia, cerebral hemorrhage and myocarditis. Fever during the puerperium was present in seventy-two cases, including seven in which acute illness resulted. In sixty-five cases (3.9 per cent.) the fever was due to genital causes, including 3.2 per cent. of spontaneous and 6.3 per cent. of operative deliveries. In the latter class there were seven cases in which fever was present before labor. In the author's series there were 1667 viable children not including the miscarriages, of these 1443

were discharged alive and well. The total fetal mortality amounted to 224 cases (13.43 per cent.). Among these 4.98 per cent. were born spontaneously and 8.45 per cent. after an operative delivery. The total mortality in the first group was 6.3 per cent. and in the latter 38.6 per cent. After excluding fifty-nine cases in which the fetal death had nothing to do with the labor, the fetal mortality is reduced to 165 cases or 10.2 per cent. in which the cause may be laid to the narrow pelvis. Nebesky believes that as the result of their experience an effort should be made to induce labor in the vertex presentations. If the degree of pelvic contraction permits of the birth of a fully developed child this is easiest in vertex presentations. The fetal mortality in breech presentations, where this occurs spontaneously or is the result of a version, is approximately ten times as great as in vertex presentations. He does not consider prophylactic version desirable and in the presence of transverse presentations advises external cephalic version. Where the cord has prolapsed replacement should always first be attempted. In primiparae and where the pelvic contraction is of a minor degree, an expectant course is desirable. If the history of previous labors or the relative dimensions of the pelvis and fetal head point to the impossibility of a spontaneous delivery, Cesarean section constitutes the most favorable method, both for the mother and the child. It must be done, however, as soon as the pains begin and before the aseptic character of the case has been interfered with. The operation may even be done before labor has begun and in such cases Nebesky believes that the transperitoneal incision through the lower uterine segment is to be regarded as a logical one. It is needless the Cesarean section should not be modified but the child sacrificed in the interest of the mother. A trial attempt with the high forceps may in certain cases avoid perforation. If the patient refuses operation, the induction of premature labor is indicated. Spontaneous deliveries with children weighing from 2000 to 2500 grams., affords the infant an excellent chance and the method must be regarded as a logical one. It is necessary, however, to conduct the same like a normal labor with the vertex presenting. The possibility of infecting the mother and the frequently atypical course of premature labor after its induction exposes the life of the child to a marked degree.

marked. degree.



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